THE

Medical and Phyſical Journal.

VOL. IX.] MARCH 1, 1803. [NO. XLIX.

Printed for R. PHILLIPS, by W. Thorne, Red Lion Court, Fleet Street, London.

OBSERVATIONS *on* SELECT SUBJECTS *in* SURGERY; *communicated by* MR. W. SIMMONS, *of Manchester.*

ON CONCUSSION OF THE BRAIN.

THE term *concussion* conveys not a precise idea of that derangement which is produced in the organization of the brain by external violence, on which account, and as more expressive of it, by association at least, I have been induced to substitute that of *contusion.* To this change of appellation I was led, by reflecting on the similarity of the occasional cause, as well as on the alteration of structure, and other circumstances, which mark the correspondence between an external contusion, and what has been denominated a concussion. In the former, besides the intumescence, the loss or diminution of the functions of the injured organ, effusion of blood from the ruptured vessels, producing ecchymosis or extravasation, and lastly inflammation, are the immediate and early consequences. In the latter, or *contusion* of the brain, as far as they are discernible, the effects are precisely the same, the senses are confused, there is more or less of extravasation, and a correspondent degree of inflammation. But here, as in every other accident, the event will materially depend on the importance of the organ to life; so that a blow upon the head, which might end in death, would occasion only a local pain and temporary loss of power, were its force spent upon an external muscle.

For the same reasons as above, I should call that a *slighter degree of contusion,* which has been usually called *a commotion.*

The treatment in either instance will not be varied; yet as language, when appropriate, will present the object more distinctly to the mind, the change of terms which is here proposed, will enable the surgeon to employ the

means of recovery with a better chance of success, and also with more satisfaction to himself.

Mr. Pott has recorded several cases of *contusion* of the brain, wherein the patients recovered contrary to his expectation, and in a manner for which he could not account. In those cases, he had bled the patients very copiously, and used such other remedies as to him were indicated, without any advantage. When, driven to despair, and without any rational prospect of success, he bled again, and so profusely, as almost to extinguish life; by which, however, they were immediately restored to sense, and subsequently recovered. If, with deference to so great an authority, I may venture an explanation, I should now say, that the last alarming bleeding had finally subdued the inflammation, which, owing to the torpor of the brain, had become inflexible to every means short of the last measure of depletion.

The secondary symptoms consequent to such an accident, are those of inflammation; although a contrary state of the system has been said to succeed sometimes, and bear the usual signs of debility. But this I should very much doubt *a priori*, and likewise from a consideration of the soundness of the constitution preceding the violence, the nature of the occasional cause, and morbid appearances after death. In one case, where symptoms of debility were thought to prevail, and the treatment was conducted accordingly, the upper surface of the brain was found incrusted with coagulable lymph, beside other vestiges of inflammation, which were discovered in different parts of the substance of it.

Where the brain has been deeply injured, the admission of light often annoys the patient considerably; yet instances do occur both of extravasation, and of simple inflammation, where the pupils remain contracted and insensible. In what the difference consists, unless in the degree of torpor, I am unable to say. But, in this way, I should be disposed also to account for that variety in the symptoms of phrenitis, as it originates in external violence, or other occasional cause. However, the intolerance of light will furnish no criterion between *contusion* and *fracture*.

On a Case of Cataract.

It has been deemed by some a valid objection to the operation of couching or depressing the cataract, that, should the humour re-ascend, the opacity of its capsule may

may disappoint the expectations, and frustrate success. Not long since, I hit upon a method of obviating this objection; at least, in that instance it was attended with complete success. The subject of it was a poor boy, then in his nineteenth year, who had been blind from early infancy. The cataract in the left eye was soft, and depressed without any difficulty, but the anterior portion of the capsule was opaque. I therefore made several attempts to detach it from its adhesions, but failed. At the moment, it occurred to me to pass the point of the needle through the centre of the pupil into the anterior chamber of the aqueous humour, and divide the capsule horizontally. This was executed without wounding the iris; and, instantly, the severed edges receded from each other, so as to expose nearly the whole circle of the pupil. During his stay in the Infirmary they continued to recede; and, at the time of his discharge, the border only of each was discernible.

As this poor boy had no knowledge of objects by sight, I presented several to him on the third day, at the first exposure of the eye after the operation. He could readily distinguish the motion of my fingers, and said the points were upwards, which was so. But when I shewed him my hat, he was at a loss; and resorted to the touch before he could say what it was. He called a table by its name, at the distance of a yard and a half from him; but whether he had a previous knowledge of it I could not learn. When questioned as to his knowledge of colours before the operation, he replied, that he could distinguish scarlet or any glorious colour. A reciprocation in the effect of objects on sound and sight, must depend altogether on the strength of the impulse on the respective senses; consequently none, except colours which are brilliant or glaring, can produce a distinguishable perception.

The fashionable mode of operating for the cataract, at the present time, is by extraction; yet, under the authority of that excellent guide, Mr. Pott, I have hitherto confined myself to that of depression. And, if I may be permitted to give an opinion upon the subject from a moderate share of practice, I see no reason to relinquish it. It is as generally successful as any operation can be expected to be; and in simplicity there is hardly a comparison. On which account, an attempt has been made lately to render the operation by extraction more feasible, and in some measure to supply the want of adroitness in the operator. In this light, the instrument lately published by Sir

James Earle is entitled to commendation, although there are several objections to it, as from its complicated structure it must be apt to be out of order, and it can never extract a firm cataract entire. And we yet know of no signs by which to distinguish with precision whether the cataract be hard or soft, or of an intermediate degree of consistency. But, if the object of the advocates for extraction may be attained by bringing the cataract before the iris, why divide so large a portion of the transparent cornea? If firm and resisting, the needle will readily push the opaque lens through the pupil into the anterior chamber of the aqueous humour, where it will dissolve; and, if soft or fluid, multiplied experience has shewn, that it will disappear by puncturing the capsule, or lacerating the substance of the lens. As an instrument of depression, I must likewise observe, the forceps are much too unhandy ever to come into general use.

Extirpation of the Globe of the Eye.

[With an Engraving.]

Fortunately this is an operation that seldom occurs; it is to the patient fraught with danger; and is more replete with horror to the surgeon than any other I ever performed. My own practice has furnished a solitary instance of it, in which my anxiety was agreeably alleviated by success. To proceed to the case:

Ann Cotton, a young woman, about twenty-three years of age, was admitted at the Infirmary, under my care, in the month of July, 1802. She came from Macclesfield, in Cheshire, where she had been employed in a branch of trade that did not exact much bodily exertion, nor particularly strain her sight. She was of a fair complexion and a healthy countenance, and, till the period of the attack, had always enjoyed good health.

When I first saw her, the globe of the left eye was protruded without the socket, and the sight of it lost. The account she gave was, that five years before she was suddenly seized, one morning at breakfast, with a severe pain over the orbit, which abated towards afternoon, but recurred again with severity in the evening, so that she got very little rest. Next day the pain intermitted, and ever afterwards recurred at uncertain periods. She was first sensible of the protrusion of the globe about four months after the attack, and at the end of two years and a half the eye became dark. Many different remedies were tried

by

Mr. Simmons's Case of Lithotomy, p. 204.

Fig. 1.

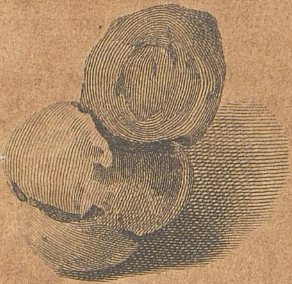
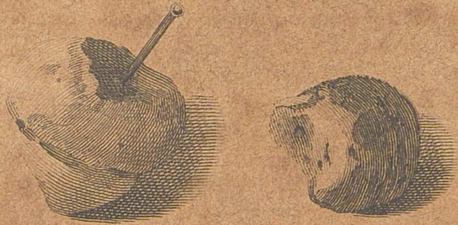


Fig. 2.



Extirpation of the Globe of the Eye, p. 200.

Publishd by R. Phillips, 71, St. Paul's Church Yard.

by several respecta[illegible] surgeons whom she consulted, without any permaner[illegible]lief; and, wearied out with fruitless endeavours to o[illegible]tain it, she gave up her case as h[illegible] at the end of three years[illegible]

The cause of th[illegible] protrus[illegible]on [illegible] was evidently seated at the bottom of [illegible] socket, but of what nature it was could not [illegible] ascertained by a common examination; therefore an incision was made into the globe, large enough to admit the end of a finger, and the contents of it were evacuated. Only vitreous humour was discharged, the aqueous and crystalline having disappeared. I mention this circumstance particularly, because the intersections within the eye were destroyed, so that it formed one common cavity; and as it would appear, by being displaced, the crystalline humour had dissolved. By the liberty given, the tumour pushed more forward, but still the nature of it was inexplicable. Accordingly, after the inflammation produced by this examination had subsided, and a reasonable time had elapsed to see what changes might ensue, it was agreed to make a more particular inquiry. In order to this, I dissected cautiously, with the point of a lancet, until I had exposed the tumour sufficiently to feel an obscure fluctuation in it. A puncture was then made, and a small quantity only of a serous fluid discharged, the rest of the contents being of too firm a consistence to be thus evacuated. Excision of the whole now offered the only alternative, which I finished without delay with a small common scalpel. She fainted away during the operation, though she did not lose much blood, and not more than four or five ounces afterwards. This bleeding from the wound was no doubt of use in abating the subsequent inflammation, which was not violent, and submitted to one general and one topical bleeding. Nor was the danger ever thought to be imminent; and, after the second day, the symptoms gave little uneasiness. As she was at no time delirious, as the pain was confined to the socket and parts contiguous, and did not shoot back towards the hind head, I conclude that the inflammation never passed the boundary of that cavity.

The eye and tumour, which appeared to consist of a condensed scrophulous substance enclosed in a proper tunic, were removed on the 12th of August; and she was discharged cured on the 11th of October following.

I have procured a drawing to be made by an ingenious artist, of the natural size; in the upper part of which, next the thread by which it is suspended, a part of the anterior

 portion

by several respecta surgeons whom she consulted, without any permanen lief; and, wearied out with fruitless endeavours to o he gave up her case as h at the end of

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ON SUPPOSED DIS

I have long entertained an opinion, advantageous to extend the limb, after the severe contusion of a joint, where it does no seasonable time, become again subservient to the purposes of volition. The secondary consequence, as in every other contusion, is inflammation, which seldom advances so high as to terminate otherwise than by resolution. But, during the inflammatory stage, membranous adhesions may and probably do form within the joint, or exterior to the capsular ligament, or both; or the muscles and tendons passing over the joint, or near it, become fixed by what has been called the adhesive inflammation; any of which impediments would hinder, and several of them combined, effectually prevent the recovery of the motion. This disability is pronounced by the people, called bone-setters, to be still a dislocation, although, in many such instances, there can be no doubt the parts had been very properly reduced. Be that as it may, they all uniformly resort to extension; and, it must be confessed, with a success which has often put even experienced surgeons to the blush.—Shall we then ascribe their better success to superior skill? That I think may be safely answered in the negative; and yet the instances are too numerous to be entirely accidental. How then shall we account for it? By making a full extension, the newly formed membranes are ruptured, and the whole is at once set free. Precisely the same effect is produced by artificial motion, and by frictions, which are the means usually employed by the regular practitioner; and these, if duly persisted in, are in general adequate to the removal of the less obstinate cause.

Finally, I have several times put it to the test of experiment; the first instance of which I shall now have permission to relate.

A man who had dislocated his shoulder, and had had it reduced by a celebrated bone-setter, came under my care at the Infirmary, as an out-patient, for the very disability which I have described. The accident had happened six weeks before, consequently it had arrived at the very period when the regular surgeon is often deserted, and for the

...herefore, was a case in point, ... necessary extension until the ... ately the poor fellow expressed ... could perform the usual motions. ... rmanent.

...nding this account of success, I ought not ... the very terrible consequences which I have ... to ensue from the misapplication of force to joints ...storted by scrofula or other enlargement. Owing to this gross and unpardonable ignorance, I have been obliged to amputate many a limb, which might probably have been saved by timely and judicious treatment. An error so fatal is not likely to be committed by the experienced surgeon, who will know how to avail himself of the above suggestion, and also to distinguish between cases which bear even a near affinity.

On Musk in Mortification.

My former communication on this subject (Vol. ii. p. 12) related to the history of the discovery of the efficacy of musk and volatile alkali in gangrene and mortification. That account I received from the late Dr. Darbey himself. In my own practice, the very general success of the bark in such cases, had left me without any experience of the present remedy till within a few months past. I had then occasion to try it, and with so much success that I feel it a duty to record the case.

The subject of it was a gentleman advanced in years, whose health had been for some time upon the decline. The mortification appeared upon his right leg, and continued its ravages up the limb, in defiance of every means to check it, which Mr. Ogden, of Ashton, and myself could devise. He had taken opium in large doses; wine, brandy, volatile alkali, and æther, in full but regulated quantities, besides the bark in substance to the quantity of an ounce a day, along with decoction and tincture. Nor were external applications disregarded; but all were unavailing, and not otherwise useful than by imposing a temporary check to its progress. In this forlorn hope we had recourse to musk, which he took three times a day, in the form of bolus, in doses of ten grains each, with an equal proportion of the volatile salt. From this he derived speedy and permanent relief; the mortification ceased, the dead parts exfoliated, and in no long time he perfectly recovered.

 The

The yellow bark has been
in several diseases; but, for s
rally inferior in efficacy, and par
gangrene, and sphacelus.

On a Case of Lithotomy.

[With an Engraving.]

I cut a boy for the stone, at the Infirmary, on the 2
of June, 1802; he was about fourteen years of age, and of a stout constitution. Nothing particular occurred during the operation, which was over in a few minutes, and he recovered without any accident. But, after the operation, the stone was found to consist of two parts, which were held in contact by a common pin, which had served as a nucleus to them. The whole was not large, as both of the concretions weighed only three drachms, though that on the pointed extremity was a good deal larger than the other, and but little was detached from the surface of either in the extraction. His general health was good till within nine months of the operation, when he perceived the first symptoms of the stone. Afterwards they became exceedingly distressing, and were more urgent than in any case I had before seen. At two years of age he was seized with a dysury that lasted for near a month, but to what cause to attribute it his friends were utterly at a loss. This illness however is the only one he ever underwent, before that affliction which terminated as above.

I should suppose that no question could arise except as to the time of his swallowing the pin, for there appears no other rational way of accounting for its passing into the bladder. If we suppose that the pin was the cause of the dysury at two years of age, the symptoms of that complaint must have arisen from consent between the bladder and rectum, while penetrating through the coats of the latter, on which they were excited. After it had passed through the muscular coat of the rectum, it had lain quiescent for many years in the cellular structure between it and the bladder; at length it was disturbed, and pushed by the point foremost into the cavity of the bladder. As soon as its point had pierced through the coats of that viscus, the concretion upon its point would begin to form; and when the whole had fallen into the cavity, that upon the head. This is my own opinion, and to my mind accounts satisfactorily for the difference in the size of the two concretions, which, had the operation been delayed a while longer,

...litional strata, have been converted ...e. The ulcerative process by which the ...into the bladder, was no doubt slow, or the ...ould have been much more acute in their com...ent than they were noted to be.

I have thought it worth while to record this singular occurrence, and to illustrate it by a plate; though a mere inspection will satisfy the reader, as one figure represents the stone entire, and the other the two parts separate.

Jan. 1803.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

NOT being a constant reader of your Publication, I should not have seen Dr. Kinglake's account of what he calls "his new mode of treating the Gout," but for a medical friend who shewed me the last Number (No. 48) within these two days. I am greatly gratified that the subject is brought forward, and particularly so on account of the success the Doctor has had in persuading his arthritic patients to follow his advice.

It is well known, in a large circle of my acquaintance, that I have made use of cold water, internally and externally, for the gout for nearly twenty years. Externally by wet cloths, and immerging the limb in the approach and every stage of the fit. I have even exhibited before medical men of the first eminence, and gentlemen of sense, not of the profession, but subject to the disease. By the first I have been pronounced RASH, and by the last called BOLD; but, unfortunately, cannot boast of a single convert. Whenever opportunity offered I have argued the rationality of the practice, it being a favourite topic, and maintained it on the theory I had imbibed of the disease, and which I have been strongly urged to put into print, but have been deterred lest the words rash and bold should be changed to MAD.

Thank God, I have not paid the debt so long predicted by my brethren of the faculty; and I pray for long life, for, should my death happen short of ninety, it will be attributed to the use of cold water in the Gout, and may prevent me Christian burial,—so strong is prejudice.

I beg,

I beg, Gentlemen, you will acce being more acquainted with your use yet seen the beginning of this subject shall not lose sight of that and what may after. I was willing to be thus early in the field nance the good work, and may come forth again when I can corroborate my own opinion by that of others. I am now creeping out of the severest fit I ever had; I plunged the limb into cold water at the height of the inflammation, when pain was excessive, and not to be subdued by opium. I obtained temporary ease.

I am, &c.

Basinghall Street, London,
Feb. 14, 1803.

S. WADE

Cases of TYPHUS FEVER, *in which the* AFFUSION *of* COLD WATER *has been applied in the* LONDON HOUSE *of* RECOVERY. *By* W. P. DIMSDALE, M. D.

CASE I. JAMES JOHNSON, aged eight years, caught the infection from his parents, who died of fever. He was removed on the 19th May, 1802, into the House of Recovery. On the 23d of May (the twelfth day of the disease), the symptoms were as follow:—pulse extremely frequent; tongue covered with a dark fur, and very dry; skin dry. A thermometer placed under the tongue arose to 104°: constant and violent delirium. The usual medical treatment not being attended with success, recourse was had to the affusion of cold water. He was taken out of bed, stripped, and a pitcher of cold water was poured suddenly over him: After being wiped, he was replaced in bed. He slept an hour; the skin felt more relaxed; no perspiration however followed. May 24th, pulse 120; skin dry; heat 100°; delirium continues; no sleep in the night. The affusion was repeated with a pail of cold water. He again slept quietly, was evidently more collected when he awoke; and soon afterwards a profuse perspiration came on, which continued through the night. On May 27th (the fourth day after the cold affusion had been first used), he was entirely free from fever.

CASE II. Thomas Knight, aged twelve years, was admitted June 16th, on the fifth or sixth day of *typhus*. In the

...i, pulse 116; skin dry, with numerous *pete-*... 104°; eyes suffused; violent pain of the head. ...l affusion, with a pail of water, was directed. ...ain of the head subsided, he slept quietly, and copi-... perspiration followed. From this time the symptoms were favourable. On the 22d he was free from disease, on the fourth day after he was removed into the house.

CASE III. John Harrogan, aged twenty-six years, came into the house on July 8th, the fifth day of the disease: pulse 120; tongue furred and dry; skin hot and partially moist; delirious at intervals; pain of the head and back. July 9th, violent delirium came on in the night, two nurses were unable to keep him in bed. The matron of the house sent for me at five o'clock this morning; he was then very outrageous; pulse 136; skin hot and parched. He was placed by force under the shower-bath, and two pails of cold water were poured instantly over him. The transition from a state of extreme fury to perfect calmness, was truly surprising. Without an effort of resistance on his part, he was replaced in bed: profuse perspiration succeeded. In three days he had no symptom of fever remaining.

CASE IV. Alfred Sweeting, aged four years, was removed into the house 13th July: he caught the infection from his mother, who died in a small and dirty apartment. On July 15th, fourth day of the disease, pulse very frequent, skin dry, heat 102°; tongue slightly furred, countenance expressive of much uneasiness. The shower bath was used: he appeared immediately to be much relieved; general moisture of the skin followed. On the 16th he was free from fever. This patient took only the saline mixture, and afterwards small doses of the diluted nitrous acid.

CASE V. Henry Hancock, aged twenty-eight years, was on the 10th of August, the fifth day of *typhus*, removed into the house. Pulse 120; tongue furred, slightly moist; skin very dry; heat 105°; severe pain of the head. The shower bath was directed. The pain of the head was removed instantly: Perspiration succeeded. The symptoms continued favourable to the 14th, when he had no complaint remaining except weakness.

CASE. VI. George Johnson, aged fifteen years, came in on the 13th of August. On the 14th, (fifth day of *typhus*), pulse 124, heat 98°; slight partial moisture of the skin;

skin; the tongue furred, and much gene
August 15th, he has been very delirious in th
extremely restless: complains of violent pain of
pulse very frequent, tongue furred, rather dry; s
numerous *petechiæ* over the body; heat 103°. The sh
bath was immediately used. The pain of the head was instantly removed, but no general perspiration followed. In the evening the head-ach and the other febrile symptoms returned with nearly the same severity as before. The cold affusion wss again used, and he felt immediate relief. Copious perspiration very soon succeeded, which continued through the night. He was free from complaint on the 17th, the third day after the first use of the cold affusion.

CASE VII. John Beard, a boy aged eleven years, was admitted on the 21st of August, in the third day of fever, with the usual symptoms: pulse frequent; much thirst; pain of the head and back; the skin rather moist. 22d, skin dry, heat 103°, pulse 116, tongue furred; pain of the head continues. The cold affusion was directed immediately; and applied again in the evening. He passed the night easily; the skin was partially moist: he had some refreshing sleep. August 23d, the skin is now dry; heat 104°; complains as before of much pain and general uneasiness. He again used the shower both. In the evening, the skin being dry, and the heat 102°, it was repeated: profuse perspiration came on in the night. 24th, skin very moist; heat 98°; pulse 100; tongue slightly furred; says he feels much better. In the evening, during a short absence of the nurse, feeling a slight return of heat and uneasiness, he poured a pitcher of cold water which was in the room over himself into the bed. The nurse returning immediately, she removed him to a dry bed; he slept quietly through the night, the skin moist, and awoke in the morning quite free from fever. The only medicines, ordered in this case, were the saline mixture, and small doses of colombo.

CASE VIII. Abraham Johnson, aged twenty years, was admitted on the 6th of September, with the usual symptoms, in the fifth day of fever. Sept. 7th, skin dry; heat 100°. The shower bath was used, which produced considerable relief. On the 9th the heat was again 100°; the skin dry. The cold affusion was repeated. He was free from fever on the 12th.

CASE IX.

... Mary Johnson, aged eleven years; removed ...ouse August 13th, in a late period of fever. She ... August 22. On the 23d, pulse 132: tongue co... with a dark fur, rather dry; skin dry; heat 103°; p...n of the head and back. Copious perspiration succeeded the cold affusion, and in two days she was entirely free from fever.

CASE X. Robert Holmes, aged twenty-six years; admitted September 7th, with fever of uncertain date. Pulse 100, tongue slightly furred, pain all over the body. In the evening the skin became very dry; heat 100°. A slight delirium with which he was affected, subsided immediately o... the use of the shower bath. He was free from fever on the 10th, but extremely feeble. By the use of a nourishing diet, with small doses of the bark and wine, he gradually regained his former strength.

CASE XI. John Dutchfield, aged twenty-one years; admitted on the 25th of September, with the usual symptoms of fever. On the 28th (ninth day of the disease), skin dry, heat 100°; used the shower bath; the heat diminished, the skin became moist. On the 2d of October he was free from fever.

CASE XII. Mary Simmons, aged forty-two years, was admitted November 18th into the house, with the usual symptoms of fever; the date uncertain. On the 20th, pain of the head exceedingly violent, skin dry, heat 99½°. The head-ach ceased immediately after the cold affusion, the skin became rather moist. On the 23d, the heat again rose to 99½; the skin dry; copious perspiration followed a repetition of the affusion. She was free from fever on the 25th.

OBSERVATIONS.

It appears unnecessary to relate the other cases in which the cold affusion has been used. In all, the good effects of it have been strikingly manifest, and in no instance has the disease terminated fatally after the use of this remedy. In the early stages of *typhus*, the affusion, with very little assistance from medicine, appears to cut short the progress of the disease. In the more advanced periods, when the strength of the patient is sufficient to admit the application of this remedy, it moderates the violence of the symptoms, and contributes materially towards a favourable termination.

termination. When the strength is greatly ex... may probably be wholly inadmissible. The patien... invariably expressed great satisfaction, after the ag... immediately following the affusion had subsided. The... lent pain of the head, so distressing in fever, is almo... constantly and immediately removed, and generally, quiet sleep succeeds, with moisture of the skin.

Case the 7th furnishes a strong illustration of these remarks. The boy always, after the first affusion, went to the bath with perfect readiness, and even solicited its repetition. The almost immediate discovery of the affusion which he had himself practised, prevented any injurious consequences; and it is evident from the report of the following day, that the slight exacerbation of fever* which came on in the evening, was completely moved by this application. The feelings of the patient in this instance immediately prompted him to have recourse to the remedy, from which he had before experienced so much relief.

Spring water has been used hitherto without any addition. A shower-bath is placed in the House of Recovery, for the purpose of applying the remedy. It is obvious that the affusion is by this means rendered more complete than by any other mode of application; it is also neater, and more commodious. Ablution of the body, by spunging with cold or tepid water and vinegar, has been frequently employed with advantage: it is however less effectual than the affusion.

I shall feel peculiar gratification if this short account, by confirming the facts stated in the elegant and truly valuable publication of Dr. Currie, should tend to accelerate the general introduction of a remedy so important in the treatment of fever; being fully convinced from the uniform success which has attended the practice, that it may be used with perfect safety in this disease, "when (to use Dr. Currie's words,) there is no sense of chilliness present, when the heat of the surface is steadily above what is natural, and when there is no general or profuse perspiration."

5th Jan. 1803.

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* The reader, who is desirous of information as to the use of the *cold affusion* (or of the *tepid bath*) in cases of *scarlet fever*, is referred to Dr. Currie's Medical Reports, p. 60, 61, and 62; and to some other parts of that excellent work.

CASE

Case of Ascites; *communicated by* Mr. Earnest, *House Surgeon to the General Infirmary, Sheffield.*

THE following case is intended, by one more example, to shew the necessity principiis obstandi. If it has that effect, I shall be sufficiently rewarded.

E. T. ætat. 27, of a spare habit and florid complexion, during the menstruating period, was exposed for ten hours to the rain. The evacuation ceased immediately and never afterwards returned. A pain took place on the left side of the abdomen; loss of appetite and spirits, succeeded with thirst; respiration frequent and incommoded; pulse frequent, weak, hard, and small; and debility in motion. Six weeks afterwards an hard tumour was felt in the pained place, and soon to this succeeded a suppression of urine and a fullness in the lower part of the abdomen, which increased so fast that in the twentieth week afterwards she was admitted into the Sheffield General Infirmary, as a dropsical patient.

The various evacuants having been given in vain, recourse was had to the paracentesis, and the annexed table will shew the number of operations, and the quantity and quality of the fluid evacuated.

The general symptoms above enumerated continued nearly stationary till about the twentieth operation, when they began to increase, and, six days before death, occasional nausea, vomiting, and syncope took place; in the end she expired suddenly.

The succeeding extispicium pointed out the material cause of the disease to be that part of the mesentery which supports the colon sinistrum or descendens, elevated into a tumour, weighing eight pounds, partly scirrhous, partly apostemous;* the consequences of which, more or less remote, were an adhesion of the convex side of the liver to the peritonæum; an adhesion to that part of the lesser intestine near the tumour to the peritonæum, and the surface of the peritonæum itself, to be covered with the coagulable part of the pus, where it touched the tumour.† All the other parts were natural.

It

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* Whenever I speak of pus in this history, I mean a puriform mucus not readily miscible in water.

† Doubt arising whether the pus found on the peritonæum might not have been formed there, it was carefully washed off, and the membrane was sound.

If I mistake not, this disease must be considered as an individual of the Ascites Mesentericus.

Jan. 27, 1803.

Table of Operations, &c.

No. of Operat.	Date.	Quantity of Fluid evacuat.	Quality of the Fluid.
	1800.		
1	March 21,	36 pints,	Mucilage much, Pus some.
2	May 28,	32 pints,	——— less, — more.
3	Aug. 4,	40 pints,	——— less, — more.
4	Oct. 6,	53 pints,	——— more, — more.
5	Dec. 1,	60 pints,	——— more, — less.
	1801.		
6	Jan. 29,	70 pints,	——— less, — more.
7	March 29,	65 pints,	——— more, — less.
8	May 25,	68 pints,	——— more, — less.
9	July 23,	74 pints,	——— less. — more.
10	Sept. 19,	76 pints,	——— less, — more.
11	Oct. 28,	72 pints,	——— less, — more.
12	Dec. 7,	72 pints,	——— more, — less.
	1802.		
13	Jan. 19,	66 pints,	——— more, — less.
14	Feb. 20,	68 pints,	——— more, — less.
15	April 3,	69 pints,	——— less, — more.
16	May 16,	60 pints,	——— more, — more.
17	June 21,	64 pints,	——— more, — more.
18	July 26,	76 pints,	——— less, — more.
19	Aug. 25,	72 pints,	——— less, — more.
20	Sept. 21,	58 pints,	——— more, — more.
21	Oct. 19,	54 pints,	——— more, — more.
22	Nov. 15,	52 pints,	——— more, — more.
23	Dec. 7,	49 pints,	——— much more — more.

Eight pints were found extravasated into the abdomen, when opened.

Pints 1414 $\div$ 8 = 176 gallons 6 pints.

To

To the Editors of the Medical and Physical Journal.

Gentlemen,

THOUGH it is not in my power to comply with the wish expressed by you in No. 46 of the Medical and Physical Journal, as no epidemic at present prevails in this part of the united kingdom, yet if the following observations relative to a fever that prevailed here in the autumn of 1801 and 1802, merit your attention, you may make what use you please of them.

In every autumnal season a bilious fever in one shape or other is generally found to be a very prevalent complaint in this city and the neighbourhood thereof. The fever of the last autumn not being characterized by any unusual occurrence, will not of course engage much of my attention; but the epidemic of the autumn of 1801 being accompanied with several striking peculiarities, will demand a more ample and particular consideration.

Though the last autumn was unusually healthy when compared with that immediately preceding it, several instances of an irregular intermittent fever were to be met with both in the town and in the country; and though this disorder apparently wore the garb and dress of a quotidian, it was unquestionably a tertian intermittent in disguise. After the rigor at the commencement, which was of short continuance, and never amounted to a chattering of the teeth or trembling of the limbs, the paroxysm terminated in the space of about sixteen hours, without sweating or any symptom of complete crisis, the apyrexia in general lasting the remainder of the twenty-four hours, during which time the pulse was observed to be of the natural standard and sometimes below it. The second came on, as did every paroxysm after, without horripilatio or any sense of cold whatever, and finished its course exactly in the same manner as the first. The paroxysms of the odd days were so perfectly similar to each other in every respect, and even so much more severe than those which occurred on the even days, that no doubt could be entertained of its being the double tertian described by different writers, though it put on the appearance of a quotidian ague.

After the stomach and bowels were sufficiently cleared by an emetic and laxative, recourse was immediately had to large doses of Peruvian bark, and very constantly with marked success; the general practice was to get the pati-

ent if possible to take an ounce of the powder during each intermission; and when this quantity was retained by the stomach, the fever most commonly yielded a complete victory to three or four ounces of it. In one instance the bark, instead of preventing a recurrence of the febrile attacks, operated in another way almost equally salutary; it evidently brought on a regular intermittent paroxysm, which went through the cold, the hot, and the sweating stage, and after having assumed the type of a genuine simple tertian, it was readily subdued by persevering in the use of the bark. In another instance of this irregular fever, an ounce of bark was taken every day for five days successively with no visible good effect whatever; after this the stomach rejecting it in every form, the disorder was allowed to take its course without any further interference of Art, to see if Nature would make any effort to throw it off; but after having waited for five or six days, and no hope of success appearing from this quarter, I directed an emetic to be taken as soon as the first symptom of the next return of fever should declare itself. The success exceeded expectation, a stop was put to the progress of the paroxysm by the operation of the emetic, and the patient was totally free from fever for the rest of the day; on lying down the following night some degree of chill or rigor was experienced from the cold of the sheets, and a return of fever which lasted fourteen hours was the consequence. Instructed by this event, I took particular care to have the sheets well warmed the night succeeding this; a draught or two of milk whey was in readiness to be taken as hot as it could be borne when the patient got into bed, and heated bricks were applied to the soles of the feet; the experiment succeeded most completely in keeping the paroxysm at bay, and by repeating this practice for three or four nights more, a rapid recovery took place.

About the middle of August 1801, a fever began to spread itself very generally among all ranks and descriptions of persons in this town and its vicinity, and was emphatically called the fifth day fever by the lower order of the people. This fever, at its onset, was ushered in with the symptoms usually attending other febrile disorders, and could not from any uncommon degree of severity in the cold stage be supposed to belong to the class of intermittents; it most commonly proceeded in its course in every respect like a continued fever, without any untoward or unpromising symptom (though sometimes the contrary took place) till the fifth day arrived, when it terminated by a profuse per-

spiration

spiration and a lateritious sediment in the urine. Very often a bilious diarrhœa came on at the same time, and seemed to assist in completing the crisis, as appeared from the pulse suddenly coming down to the natural standard, in a short time after the complaint in the bowels had taken place. The patients continued in a state of apparent convalescence for four or five days, when in most cases, if unassisted by medicine, they were doomed to undergo a second attack; nor was the business then to have an end, as seldom an instance occurred when a relapse as it was called had once taken place, that a third, and sometimes a fourth return of the fever could not with a high degree of probability be counted upon. The duration of the relapse was fluctuating and uncertain, sometimes exactly measuring the same number of days as the first attack, though frequently it was observed to finish its course in the space of three days, and sometimes within the term of forty-eight hours. The interval between the paroxysm, as may be readily supposed, was not fixed or determinate, irregularities in diet and regimen, and many other incidental circumstances having often contributed to shorten the natural period; but when those adventitious causes were not allowed to operate and interrupt the regular progress of the disorder, the intermission was generally found to last from four to five days.

The pulse was in general far different to what we meet with in the typhus or low fever of this country, it was slower, fuller, and softer, and did not indicate that depression of strength and want of energy, which act so conspicuous a part in the typhus; on some occasions it is true the pulse was observed to be very frequent, feeble, and tremulous, convulsive twitchings took place in different parts of the body, and the patient was disturbed and agitated by delirium and incoherency of ideas; these however were merely the precursors of a crisis which made their appearance a few hours before this event, and even dissipated on its taking place. Somewhat about this period the crisis was now and then observed to be ushered in by a regular aguish paroxysm. After the fever had wore itself out, or was subdued by medicine, the surface of the body was often observed to be tinged with as deep a yellow colour as that of a person in a confirmed jaundice, but this appearance did not retard the patient's recovery, and gradually went off without any assistance from medicine.

When this epidemic first began to prevail, it was treated as a regular continued fever, and its terminating success-

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fully about the fifth day was attributed to the mode of cure that was adopted, in which James's powder and other antimonials had a considerable share; further experience soon demonstrated that this opinion was formed with rashness and precipitancy, as the issue was equally auspicious with the simple draught of Riverius as the powerful febrifuge of Dr. James.

Repeated observation having soon led to a conviction that this fever was in some respect an intermittent, very little doubt was entertained of the efficacy of the bark in effecting a cure, particularly as the intermissions were so long as to afford an opportunity of giving any quantity of it that might be thought necessary. Here also the folly of placing too much reliance on the virtue and power of medicine was apparent. It was the custom to administer an ounce of the bark in the course of twenty-four hours, and repeat it in the same quantity every day for four or five days, or as long as the intermission lasted; sometimes this practice was found to succeed effectually and prevent any further recurrence of the fever; but at other times it seemed to exert no power whatever over the disorder; and if from negligence, or any other cause, the use of the bark was not resorted to until after the conclusion of the second attack, it was then found to be of inferior force and efficacy to what it was when recourse was had to it immediately after the first paroxysm had completed its period. In this case the force of habit being superadded to the disorder, increased the power of resistance, and rendered it superior in many instances to the agency of this remedy.

Under what denomination this fever should go, and if it be placed among the intermittents, to which species it should be attached, it is not an easy matter to determine; it was certainly a continued fever for the four or five first days, and after this broke down to a type more resembling a quartan and quintan than any other. But what appears of infinitely more importance than its classification is, that of the immense numbers which during the space of almost two months were seized with this fever, scarcely an instance occurred of its proving fatal; whether the patients were treated with emetics, antimonials, &c. in the onset, and in the intermissions were liberally supplied with the bark, or that the whole business was entrusted to the vis medicatrix naturæ, the success was equally conspicuous and brilliant; this was clearly exemplified by the recovery of at least two hundred persons without medicine, without nutriment of a proper quality, without any of those com-

forts

forts or conveniencies of life that are found to contribute so essentially to the re-establishment of the health of convalescents from fever. So fully satisfied of the inutility of medicine of every kind were the lower order of people, among which it mostly prevailed, that either owing to their daily experience of the harmless nature of the fever, to their want of faith in the efficacy of medical aid in this as well as in almost every other disease, or to both these causes united, the fact is, that no entreaty could prevail upon them to make a trial of emetics, antimonials, Peruvian bark, or any other remedy within the whole range of the Materia Medica.

From such a signal display of the salutary efforts of the constitution in the extinction of this fever, it would be wrong to argue the impotency of medicine therein, and injudicious in the extreme to reject with fastidiousness its assistance on any similar occasion in future; on the contrary, in all such cases, the cure should begin with clearing the stomach and bowels, exhibiting immediately after neutral salts and preparations of antimony, until a complete intermission be obtained, when the Peruvian bark should be given in full and efficient doses, and repeated at proper intervals, so as not to oppress and overload the stomach with two large a quantity. Though this practice may often fail in answering the sanguine expectations entertained by some persons of the infallibility of the bark in the suppression of this or a similar fever, nevertheless opportunities will frequently occur to them of beholding its prompt and decided triumph over this disease; and should it continue its course unabated, the consolation will await them of not being the authors of a more serious evil than the temporary annoyance and tumult of the stomach and bowels from the irritation of the bark.

Whether intermitting and remitting fevers be infectious or otherwise, is a question that has been much agitated among physicians, and not a little contrariety of opinion still prevails on the subject. A late eminent writer and teacher, whose opinion ought to have much weight, considered all kinds of fevers infectious, though he looked upon semitertians and other varieties of intermittents to be so in a very inferior degree. Without any partiality for either supposition, I shall relate with fidelity, what immediately fell within my own observation, and leave my readers to determine the point with themselves. I have had many opportunities of seeing single persons in different families among those in affluent circumstances, confined with the fever

fever in question, and in no one instance could I discover that it was propagated by contagion; and from the minute investigation that took place, such an event could not have happened without my being made acquainted with it. On the other hand, whenever this fever made its appearance in a house belonging to the lower class of people, it uniformly, with very few exceptions indeed, spread itself through the whole of the inhabitants of the dwelling; to the authenticity of this fact, I can bear witness from repeated and attentive observation, and I think it can be satisfactorily explained.

The habitations of the poor and working people of this town are divided by a kind of partition into two apartments, that part which they call a kitchen, and a room immediately adjoining it, where they are all doomed to sleep, or are huddled together with scarcely a blanket to cover them. A second bed is never heard of, let the number of the family be what it may. In ninety-nine of one hundred of these hovels, neither chimney nor window is to be met with, except an aperture of about six or seven inches square, which they contrive to have glazed for the purpose of admitting light. This solicitude on their part to prevent the admission of air is for the purpose of protecting them against the inclemency of the weather during the winter, as fuel is ordinarily sold at a very advanced price at this season of the year; moreover, a hog is always an inmate of the family, and sleeps under the same roof with it every night; a heap of dung for the cultivation of potatoes, is placed on one side at the entrance of the door, from which is constantly oozing a quantity of water, which stagnates and putrifies from lodging in a bed usually dug for the reception of the manure. If any one of the family happen to be taken ill of a fever, (no house of recovery having been as yet erected for the reception of such patients) no alternative remains for the rest but to allow the sick person to remain where he is, and expose themselves to the danger of imbibing the infection that is constantly exhaling from him, until each in his turn is fated to undergo the same species of affliction and suffering as the first whose lot it was to be attacked. Under all these circumstances, it cannot be a matter of surprise or astonishment, when once a fever has got footing in one of these abodes of poverty and wretchedness, that it should prove infectious, and spread terror and dismay through the rest of the miserable inhabitants thereof. From the number of causes concurring to accumulate and concentrate

concentrate the poison of infection, a person from reasoning upon the subject would be naturally led to believe, that in length of time the fever might be apt to change its nature, and assume the characteristic marks of what is called a putrid fever; but in no case whatever was such a transition found to take place; the original febrile complaint preserved its character throughout; and from the beginning to its final dissipation, the distinctive marks of an intermittent, at one period or other, were prominent and conspicuous. I am, &c.

Kilkenny, Dec. 11, 1802. MICHAEL RYAN, M. D.

Experiments *and* Observations *on the* Putrefaction *of* Flesh *in different Kinds of* Gas; *by Professor* C. H. W. Bockmann, *of Carlsruhe.*

The phenomena of putrefaction, which are observed on animal substances in general, but particularly when exposed to different species of gas, have engaged the attention of many naturalists and chemists, and a number of experiments have been made, for the purpose of ascertaining the several facts attending so remarkable a process. Among the chemists who have chiefly devoted their researches to this subject, Dr. Priestley and Signor Brugnatelli deserve to be ranked first, having made a series of experiments on the putrefaction of animal substances in atmospherical air, carbonic gas, hydrogen gas, and nitrous gas. The former gentleman found, that on exposing a dead mouse to putrefaction in atmospherical air, the mass of air was at first increased, but diminished afterwards by the fourth or fifth part, whereby some carbonic gas was disengaged. Farther, by the putrefaction of mutton and beef, hydrogen gas was evolved; and a mouse, placed in carbonic gas, passed over into a state of putrefaction about a month after. Putrid mutton yielded likewise hydrogen gas in this gas. Above all, the nitrous gas was found to prove particularly antiseptic; as mice, preserved in it during the whole month of July, had neither received a putrid smell nor showed any other symptoms of putrefaction, their flesh being almost fresh, and quite solid; whereas the flesh of a pigeon began to change its smell and taste after being suffered to remain in it for several months; and though these could not properly be called

called putrid, and the flesh had still remained of a solid consistency, yet when roasted it could not be eaten; pigeons, however, preserved in nitrous gas for longer than six months, emitted a fetid stench, the flesh remaining solid; and, lastly, Mr. Priestly observed, that hydrogen gas appeared not to stop the progress of putrefaction. Signor Brugnatelli proved, however, by his experiments, that flesh could be preserved in hydrogen gas for several days, and even for some months, without being rotten; on which account he considers this gas as antiseptic.

Notwithstanding these facts and observations, I have thought it not improper to repeat those experiments of Priestley and Brugnatelli, to continue them in a different manner, and to ascertain more precisely the phenomena which flesh exhibits in single gasses, and in their different mixtures, during the several periods of putrefaction; for which purpose I have made the following experiments:

Exp. 1. Bottles of white glass, holding about 8 or 10 cubic inches of fluid, were filled with different species of gas; of these, the bottle signed A, contained *atmospherical air*; B, *oxygen gas*, prepared from manganese; C, *azotic gas*, separated from atmospherical air; D, *hydrogen gas*, prepared from diluted sulphuric acid and iron filings; E, *carbonic gas*, prepared by chalk and diluted sulphuric acid; F, *nitrous gas*, prepared by diluted nitrous acid and copper wire; G, half of *nitrous gas* and half of *carbonic gas*. The openings of these bottles were shut under water with corks, on which were fastened pegs of wood with small pieces of beef. Some minutes after the flesh in B, F, and G, grew evidently redder. The bottles were put into a vessel with water, which being covered with a plate of white iron, was exposed to the action of the sun in the first days of July. The following morning the flesh in F and G was of a beautiful red; towards the evening it appeared in B, white, yellowish, and somewhat putrid; in C, D, and E, however, but particularly in F and G, it remained red. On the morning of the third day, I found no considerable alteration; but towards the evening of the same day, the flesh in B appeared putrid, and also in A it had acquired a bluish putrid colour. On the evening of the fourth day, the flesh in F was of the most vivid red colour; next to it came that in G; then the flesh in E. In D and C it had the same colour, which was less vivid than in the other bottles. In A, the flesh was of a bluish red, and a little brownish; in B, it was putrefying, of a yellow, brown, and bluish colour; some water had entered

ered this bottle. On the sixth day, I found the flesh, particularly in F and G, and also in C, E, and D, to be still red; in A, and principally in B, it was very putrid; more water had entered this bottle. On the eighth day, the putrefaction in A and B was considerably increased; the flesh was entirely surrounded with water. In the rest the colour appeared a little darker, which, however, at least, in F and G, seemed not to depend on a beginning putrefaction, but it appeared to be dried by the heat of the sun; in C, D, and E, the colour was rather bluish red. In A, the colour of the flesh was blue, and it looked putrid. The flesh in B, being no more in contact with the gas, I took it out; it had a very strong putrid stench, and a white colour resembling animal fat. The water was of a yellow greenish colour, and reddened the blue vegetable colour, but the redness disappeared by degrees. The gas was diminished to a sixteenth part of its former volume, &c. On the ninth day, the putrefaction had increased in A, and the flesh in the other bottles became darker. After ten days the flesh in C, D, E and F had grown darker, and was almost dried up; in G it had retained a red colour, but in A it was moist, dark blue, and of a putrid appearance. It was not altered considerably afterwards, except that it was somewhat dried. Several weeks after the pieces of flesh were taken out of the bottles, they had no remarkable smell, but when moistened with water they emitted more or less of a peculiar caseous smell. The heat which had acted on the flesh during this experiment was between 10 and 14° Reaum. The middle temperature was about 14—16°. Several times I had also exposed the vessels to the full action of the sun.

Exp. 2. I filled several small bottles, each holding 12 to 15 cubic inches, with the following kinds of gas: 1. Nitrous gas. 2. Hydrogen gas. 3. One half of nitrous gas and half of carbonic gas. 4. Carbonic gas. 5. Atmospherical air. 6. Oxygen gas. 7. Azotic gas. Having brought into them pieces of flesh, in the same manner as had been done in the former experiments, I observed a remarkable redness in the flesh which was placed in nitrous gas, oxygen gas, and also, in some measure, in the carbonic gas. On the second day, the flesh in 1, 3, 4, and 7 was of a vivid red colour, and likewise in 5. In 2 it looked greyish black; and in 6 whitish yellow. On the third day, the flesh in 6 had already a putrid appearance; in 5 it had only grown a little bluish, but was not yet putrid. On the fourth day, it was grey yellowish in 6, and very putrid.

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In 5 it began to grow putrid, whereas in 1 it was still beautifully red; in 2, 3, 4, and 7 it was less red than in 1. On the sixth day I found the flesh in 1, 2, 3, 4, and 7 to be no farther altered; in 5 however it looked brown and putrid; in 6 it was quite rotten. On the eighth day, it was in 1, 2, 3, 4, and 7, of a bluish red colour, somewhat dry, but without putrefaction. In 5, and particularly in 6, it had a dark grey colour, and was almost liquid. On the following days, the remainder of the flesh in 5 and 6 was of a blackish colour; the rest was dark red, and dried up. On being taken out of the vessels several weeks after, the pieces appeared as in the former experiment; both experiments were made at the same time.

Exp. 3. The bottles being again filled with different mixtures of gasses, pieces of beef were introduced in the same manner as before; namely, there was contained in A hydrogen gas; B oxygen gas; C equal parts of hydrogen gas and of carbonic gas; D equal parts of azotic gas and of carbonic gas; E equal parts of hepatic hydrogen gas and of carbonic gas; F equal parts of oxygen gas and of carbonic gas; G equal parts of nitrous gas and of hydrogen gas; H equal parts of hepatic hydrogen gas and of azotic gas. The pieces of beef in B and G grew soon considerably redder; in E and H however they received a yellowish colour, while in the other bottles it experienced no considerable alteration. Second day, the flesh contained in A C and G had of all the reddest colour; it was less red in F and B; in H and E its colour was yellowish and greyish brown. Third day, the flesh in A C and G was still of a beautiful red; somewhat less in D; whereas in B it looked putrid and brownish; in the other vessels its appearance was not visibly changed. Fourth day, in G it was yet fresh and of a bloody colour; it appeared less red in A and C; in E and H the colour was grey; in B blackish and marks of putrefaction were evident; in F it looked dry and dark brown. Fifth day, the flesh appeared to be dry on the whole; it had the finest red colour in G, whereas in A C and D the colour was rather more or less dark red; in E and H it was grey, blackish; in B and F dark brown. Eighth day, the red colour of the flesh in A C D and G had grown darker, but finding no change to have taken place in the pieces of flesh contained in the other bottles, I determined to examine the remaining pieces. The flesh in A showed no marks of considerable putrefaction, it being still red but dry, and therefore of a dark colour; no considerable smell; which however was likewise to be perceived in the

the remaining gas. On applying a candle to the gas, it took fire without any explosion; phosphorus did not fume nor shine in it. The flesh taken from the bottle B had a yellowish black colour, a putrid stench, and its volume had considerably decreased. The remaining gas made lime-water turbid, a candle burned in it, &c. The flesh in the bottle C looked fresh, had but a slight, not quite putrid smell; by being shaken with lime-water it diminished about one half of its volume; phosphorus shone in the remaining gas, and the gas took fire without any explosion. The smell of the flesh in D was inconsiderable; the remaining gas troubled the lime-water, and extinguished a burning candle. The surface of the flesh that had been contained in E was greyish black, smelling like hepar sulphuris, but no other marks of putrefaction were perceived; the gas was absorbed by lime-water, and extinguished a candle. The flesh in F was of a yellowish brown colour, solid, but its smell was putrid; lime-water was troubled by the remaining gas. The flesh in the vessel G was solid, red, and without any putrid smell; lime-water became only a little turbid by the gas, and it was inflamed without explosion. In H the flesh was greyish, solid, and without any remarkable smell; the gas emitted an hepatic smell, and took no fire. During this experiment the temperature was between 10° and 30° Reaum.; the mean temperature amounted to 14½° Reaum.

Exp. 4. The bottles being again filled with different gases, contained, No. 1. Hydrogen gas. 2. Two-thirds hydrogen gas and one-third oxygen gas. 3. Half hydrogen gas and half oxygen gas. 4. One-third hydrogen gas and two-thirds oxygen gas. 5. One-sixth hydrogen gas and five-sixths oxygen gas. 6. One-ninth hydrogen gas and eight-ninths oxygen gas. 7. Oxygen gas. The pieces of beef that were introduced into the vessels were quite fresh, and some time after I observed the flesh in 1 to have received a beautiful red colour, decreasing in the other vessels in proportion as to the less oxygen that they contained. Second day, I found the flesh in 1 still red, but the colour had become less red in the other vessels, particularly in 7; the pieces in 2, 3, 4, and 5, were the same, but 6 approached more to 7, which had a yellow putrid appearance. Third day, in the evening, I found the flesh in 1 to be still fresh and red; in 2 it was darker; but in 3, 4, and 5 it appeared putrid; in 7 the putrefaction seemed to be particularly great, but on the whole there was no great difference in the last six bottles with regard to the consistency and

and colour of the flesh contained in them. Fourth day, the flesh in 1 was not particularly changed, but that in the other vessels was red, brown, and putrid. The temperature had been between 12 and 30° Reaum. Six weeks after, I found the flesh to have more moisture than it had on the fifth day; in 1 it was in some places light red, in others yellowish brown; in the other vessels it was yellow brown, blackish and very putrid. I preserved the flesh in these bottles for eighteen months, without observing any visible alteration.

Exp. 5. About the time I was making the fourth experiment I filled some other glass bottles, each containing 14 cubic inches, with the following kinds of gas. No. 1. Half nitrous gas and half carbonic gas. 2. Half azotic gas and half carbonic gas. 3. Half hydrogen gas and half carbonic gas. 4. Half hydrogen gas and half nitrous gas. 5. Half azotic gas and half nitrous gas. 6. Half azotic gas and half oxygen gas. 7. Half azotic gas and half hydrogen gas. Pieces of flesh being introduced and the vessels well shut, a considerable redness appeared on the flesh in 1, 4, and 5. Second day, the flesh in 1 and 5 was particularly red; in the same manner it was in 2, 3, and 7, but in 4 and 6 it was yellow, reddish, and putrid. Third day, in 1 the flesh still remained of a beautiful red; less in 5; in 2 and 3 it was dark red; in 4 brownish and putrid, somewhat liquid; in 7 reddish, but not putrid. Fourth day, the pieces were all dark brown or dark red; in 1 and 5 however, it had the best appearance. Two months after the flesh appeared dark yellow brown, except in 1 and 5, in which it was dark red. In this state it remained unaltered during fourteen months.

Exp. 6. A small bottle, A, being filled above quicksilver with ammoniacal gas, a piece of beef was introduced, that had been well dried before with blotting paper; but notwithstanding the moisture of the flesh having absorbed some gas, it became necessary to admit a new portion. Having shut the opening with a stopple covered with a wet piece of bladder, I observed the flesh to have remained unaltered some hours after. Another bottle, B, was likewise filled over quicksilver with muriatic gas, and a piece of beef being introduced in the same manner as before, it became whitish and moist. A bottle, C, was filled with oxydated muriatic gas, and the flesh brought into it, acquired soon after a white colour, while the gas was partly deprived of its yellow colour, and a liquor was perceived, which was probably common muriatic acid. Two bottles signed

signed D and E were filled in the same manner with hepatic gas, into which were immitted pieces of beef, which soon became blackish. At last I filled a bottle, G, with phosphoric gas, in which the flesh retained its colour; but in the bottle H, which I had filled with three parts of phosphoric gas and one part of hepatic gas, the flesh became grey some time after. On the second day, I found the flesh in D, E, and F, had become blackish, whereas it had remained unaltered in the rest. Third day, the flesh in G and H was pretty fresh, but in A it was particularly blackish, in C white, and in D and E yellowish, in B evidently putrid. Sixth day, in G and H the flesh appeared dry and darker, as before, though it was still red. In A and B it was grey and blackish, in C yellowish, in D and E dark grey. The flesh being not much altered the following day, I took it out on the ninth day, and made the following observations. In A it was of a glossy black, dry and solid, its smell a little ammoniacal; three-fourths of the gas were absorbed by water, the remaining gas extinguished a candle, and phosphorus did not shine in it. In B the flesh had not a very putrid smell, but it was soft and brown; the gas extinguished a candle, but phosphorus emitted fumes in it. In C the flesh was yellowish and soft. In D the flesh had an hepatic smell and was blackish; the gas had lost nothing of its properties, and proved inflammable. In E the flesh was black, solid, and had the hepatic smell; the gas was no more inflammable, and phosphorus emitted fumes in it. On opening all these bottles under water, a part of them were filled with water, so that some part of the gas seemed to have been absorbed. But on opening the bottle G, no water had got in; the flesh had a caseous smell and was of a dark red colour, the gas was inflammable without causing an explosion. The same appearances were observed in the bottle H.

Exp. 7. I prepared very pure oxydated muriatic gas and intercepted it in bottles, each containing 15 cubic inches, part of which were already filled with other species of gasses, and thus I obtained the following mixtures: No. 1. Half oxydated muriatic gas and half azotic gas. 2. One-fourth oxydated muriatic gas and three-fourths hydrogen gas. 3. One-twentieth oxydated muriatic gas, one-fourth azotic gas, and about three-fourths hydrogen gas. 4. Half oxydated muriatic gas and half oxygen gas. 5. Oxydated muriatic gas. 6. Half oxydated muriatic gas and half hydrogen gas. Having introduced into them pieces of beef, I shut the vessels as closely as possible.

In

In 5 the flesh had already grown white seven or eight minutes after, and also the flesh in 1, 4, and 6 was gradually discoloured. On the second day, all the flesh except in 3 was perfectly white; but towards evening, having been exposed to the action of the sun, it had changed to a dark yellow colour; in 3 however it was yellowish white. Third day, the flesh became brownish; in 3 it was yellowish red. The following days it received a darker colour. The temperature was from 12 to 22 degrees. Ten days after, on examining the whole, I made the following remarks:

No. 1. About one-third its volume of water penetrated into the bottle; the flesh was solid but friable, and had a particular though not putrid smell; the remaining gas troubled the lime-water, and extinguished a candle.—No. 2. The flesh was about the same as in No. 1; the gas made lime-water turbid, and was inflammable.—No. 3. The flesh was solid, hardly friable, and nearly of the same smell as No. 1; the gas was inflammable.—No. 4. On opening the vessel a quantity of water entered it; the flesh was found as in No. 1; lime-water absorbed part of the gas and became turbid; a candle burned in it.—No. 5. The flesh was easily friable, a little greasy, had a particular but not putrid smell; lime-water became turbid by the remaining gas, which also extinguished a candle.—No. 6. The flesh was nearly as in No. 1; the gas troubled lime-water, and it was inflammable, causing at the same time a slight explosion.

Exp. 8. The following bottles were filled with gas, into which pieces of beef were introduced as before.—A, nitrous gas; B, carbonic gas; C, half nitrous gas and half carbonic gas; D, hydrogen gas; E, azotic gas; F, atmospherical air; G, oxygen gas. Several hours after I found the flesh in A, B, F, and G, redder than that in D and E. Second day, towards the evening, it was beautifully red in A and C; less red in B, D, and E; in F it was dark red, and somewhat putrid; in G however blackish, greenish, and in its appearance more putrid than that in F. Third day, in the bottles A, B, C, D, and E, the flesh had grown darker and dry; in F it looked putrid and of a bluish dark brown colour; however, it appeared more putrid in G. The following days the flesh became darker and the putrefaction seemed to have increased in F and G. The temperature was between 14—20° Reaum. Two months after the flesh in A became yet darker without putrefaction; it was less red in B and C; in D and E the colour was brown; in F and G it was very putrid, yellowish, brown, and black. A year

A year after, I found the flesh in A and C to be the best preserved; whereas, in the other vessels, it was more or less yellow, brown, and blackish. Fifteen months after I opened the vessels under water, and observed as follows: A. Much water entered the bottle, the flesh was solid, of a dark red colour, and had a slight caseous smell.—B. The flesh had a caseous smell, was soft and greasy; the gas extinguished candle-light, and troubled lime-water.—C. The flesh was putrid, grey, green, reddish, but solid; it extinguished a candle immediately. D. The flesh had a slightly putrid smell, was friable, the gas was not inflammable. E. The smell of the flesh was somewhat putrid, but it was solid; the gas extinguished light, but caused little turbulency in lime-water. F. The flesh was greasy, of a very nauseous putrid smell, which it had likewise communicated to the gas. G. The flesh was very soft and greasy, it had a very disagreeable smell; lime-water became very turbid by the admixture of the remaining gas. The quantity of the gas was found to be more or less diminished in the bottles, as appeared from the water entering into the vacuum. All the remaining gasses were tried by the eudiometer.

Exp. 9. Several glass bells, provided at the upper extremity with small necks and openings, with stopples well luted, on which pieces of flesh had been previously applied, were filled with different gasses; as, No. 1. with hydrogen gas. 2. Nitrous gas. 3. Azotic gas. 4. Atmospherical air. 5. Oxygen gas. The pieces of flesh in 2 and 3 acquired immediately a beautiful red colour, which continued in 2 the following day; but in 5, and also in 4, it had a darker colour, and a putrid smell was to be perceived. Third day, in 2 the flesh was still red, and of a fresh appearance; in 3 darker, but without a putrid smell; in 4 it was dark brown, and of a putrid smell; and in 5 the water had entered into the bell, surrounding part of the flesh, where it was whitish, but in the gas itself it was dark red, of a putrid appearance. I filled the bell again with oxygen gas. Fifth day, no particular alteration was observed; however, of the oxygen gas about one-quarter was absorbed; and likewise the nitrous gas was diminished, so that the water touched the flesh. A month after this I found the flesh in 1 yellow red, but the water surrounding the bell had entered so far that the piece of flesh was quite immersed in it. In the same manner I found it in 2, but the flesh was hard, and of a whitish colour. In 3, less water had entered, and the flesh was still red but moist.

In

In 4, only part of the flesh was covered with water; it was dark or blackish, and liquefied. In 5, the flesh was for the most part liquefied, and the water nearly filled up the bell, on which account I had, from time to time, admitted a new portion of oxygen gas. In the seventh week, the water in 1 had risen so much that only one-seventh of the bell remained vacant; the flesh, which was under water, seemed however to be solid, but on being touched I found it to be soft and greasy; it was of a white colour, and of a putrid smell. In 2, the flesh appeared solid, white, and had no particular smell. In 3 the gas had a putrid smell like the flesh, which was white and soft. In 4, the water filled three-fourths of the bell, the flesh was blackish and very putrid. In 5, the flesh was nearly liquefied, the remaining gas had a very fetid smell; the eudiometer showed, in all the gases, more or less diminution, &c.

Exp. 10. Fresh pieces of beef were put into several glass bottles, containing the following gasses: No. 1. Nitrous gas. 2. Carbonic gas. 3. Hydrogen gas. 4. Azotic gas. 5. Atmospherical air. 6. Oxygen gas. Second day the redness of the flesh in 1 had much increased, and likewise in 2, 5, and 3; but in 6 the colour was less vivid, it appeared a little yellowish. Third day, except in 6, where the flesh began to dry up, no alteration was observable. Fourth day, in 6 the flesh looked extremely putrid; in 1 it was fresh and red; less in 2, 3, and 4; in 5 it appeared yellowish, with increasing putrefaction. Eighth day, in 1 the flesh was not yet altered; and in 2, 3, and 4, no certain sign of putrefaction could be perceived; in 5 it was putrid; in 6 the putrefaction had increased, though it still remained solid. Twelfth day, in 1 the flesh continued to be red; in 2, 3, and 4, it had a light red colour; in 5 it began to liquefy, and was of a bluish colour; in 6 it was very putrid, blackish, and liquid. A month after putrefaction was perceptible in all the pieces except in 1, which I still found fresh after a space of four months; it was solid, and had only a very slightly caseous smell. In 2, 3, and 4, the colour was more or less blackish, the smell putrid; but in 5, the flesh was soft, moist, and liquid, and emitted a putrid stench; all which circumstances were still more obvious in 6. The vessels had, during the experiment, always remained in the shade; the middle temperature was, in the first weeks, from 11 to 16° Reaum.; but afterwards it was only from 10 to 13°. I exposed the putrid pieces of flesh to oxydated muriatic gas, by which white fumes were raised; the putrid smell disappeared, instead of

of which a caseous smell remained which could be no farther destroyed.

Exp. 11. I took pieces of flesh, which had been already kept twelve days in a cellar, and were almost putrid, and introduced them into glass bells, which I had filled with the following gasses: A. Nitrous gas. B. Azotic gas. C. Hydrogen gas. D. Half atmospherical air and half oxygen gas. The flesh in A. became considerably redder, but the other pieces did not change their colour. Second day, I found the flesh in A. of a beautiful red; in B. and C. it was not much changed; in D. however, it was of a dark colour, and putrid. The flesh in A. retained its colour for a considerable time after; but in B. and C. and still more in D. the flesh continued to putrify. The bells were standing in the shade, at a temperature of 10 to 15° Reaum. On comparing the experiments described here, I think myself enabled to draw the following results.

1. *Oxygen gas* surpasses all other gases in promoting putrefaction within the shortest time, and rendering it most perfect; for notwithstanding that the flesh assumes a redder colour soon after its being immersed in it, the marks of putrefaction become visible within twenty-four hours, the flesh growing yellow or brown, with small black spots on its surface, and bluish black and liquid. Part of the oxygen is hereby decomposed, and carbonic gas is produced. There is very little or no hydrogen gas generated during the process, a circumstance which seems to render the opinion of Priestley very doubtful, as is likewise intimated by Berthollet, who says, that the gas produced by putrefaction contains much carbon but no hydrogen.

2. *Azotic gas* neither particularly promotes nor hinders putrefaction. Flesh exposed to it retains at first its natural colour; but eight, sixteen, or more days after, the external marks of putrefaction gradually appear, which, slowly advancing, never becomes perfect; the flesh remaining more or less solid, grows greasy, with a caseous putrid smell, which however is by no means so strong as in oxygen gas, and only a small quantity of carbonic gas is produced.

3. *Hydrogen gas* has nearly the same effect on flesh as azotic gas; and if in some experiments the flesh appears better preserved in it, we should rather ascribe this circumstance to the nitrous fumes with which it is sometimes a little impregnated; it is, however, in some measure deprived of its inflammability, and carbonic gas is evolved. From my experiments it appears, that Signor Brugnatelli's opinion

opinion is by no means confirmed, who thinks this gas to be particularly antiseptic. It likewise results from my experiments, that the accession of air and water is not absolutely necessary for producing putrefaction, as is commonly believed.

4. *Carbonic gas* but slightly reddens flesh immersed in it; and though it prevents in some measure the progress of putrefaction, yet within four or five weeks the flesh arrives at the same degree of corruption as in azotic and hydrogen gas; it becomes soft, greasy, and if not dried up it receives a particular caseous and putrid smell.

5. *Hepatic gas* imparts a yellow, grey, and blackish colour to the flesh, and in its other effects it resembles hydrogen gas.

6. *Phosphoric gas* seems to be somewhat more antiseptic than common hydrogen gas, but on the whole its effects on flesh are nearly the same.

7. The effects of *ammoniacal gas* and of *muriatic gas* on flesh are not easily to be determined, as they are in some measure deprived of their gasiform state, combining themselves with the moisture of the flesh, and thus forming liquid ammonia and muriatic acid, both which act in a different manner from the gas.

8. The *oxydated muriatic gas* is partly changed into the acid of the same name by the moisture of the flesh; and in this state, and also as gas, it discolours flesh, which sometime after becomes soft. Its white colour, however, is changed into yellow by the action of sun-light.

9. *Nitrous gas* is above all others possessed of the most eminent antiseptic power; and flesh grows in it beautifully red, which colour it retains for several weeks; it then passes over into dark red, and keeps its fresh appearance for above a twelvemonth. It never becomes perfectly putrid, but only obtains at last a slight caseous smell. Flesh already attacked by putrefaction is preserved for a long time in this gas, which however in this manner, by degrees, loses its property of yielding red nitrous fumes, when mixed with oxygen gas.

10. *Atmospherical air* is to be considered as a mixture of oxygen gas and azotic gas, on which account the progress of putrefaction goes on more slowly than in pure oxygen gas; nor does it arrive at such a degree as in this gas.

11. In mixtures consisting of azotic gas, hydrogen gas, and carbonic gas, with a portion of nitrous gas, the last evidently exerts its antiseptic quality on the flesh contained in them.

12. Mix-

12. Mixtures of other gasses with hydrogen gas and azotic gas, prove not particularly antiseptic.

13. Mixtures of azotic gas and hydrogen gas, or of oxygen gas or atmospherical air, with carbonic acid, have no considerable and lasting antiseptic quality.

14. Oxydated muriatic gas mixed with different other gasses, has antiseptic effects, but is easily changed into acid by the moisture of the flesh.

A singular EXTENUATION *in the* LEG, *with the Method of Cure; by* MR. JAMES LUCAS, *of Conisbrough, Member of the College of Surgeons in London.*

A Young gentleman, free from any other malady, when on business in Ireland, that obliged him to stand and walk much every day, found his left leg become gradually weaker than the right, yet without any further pain than such as might be attributed to all the muscles being affected by the uncommon exertion required. He soon became unequal to transact his business, and discovered, by admeasurement, that his leg was pining away, which induced him to go to Dublin, where he remained some weeks under the management of a surgeon of eminence, but without any perceptible relief. He then revisited England, and placed himself under the care of a late hospital surgeon in London, for as long a time, without experiencing any greater benefit. As those whom he had consulted, ascribed the disorder merely to weakness, he was advised to try country air; he accordingly came into Yorkshire, and requested that I would spare no exertion in ascertaining the source of a complaint, which totally disabled him from prosecuting not only important but pressing business.

In fulfilling his anxious wishes, the wasting or atrophy of the affected limb appeared to me not to be universal, but confined to the fore part of the leg, and along the course of the tibialis anticus muscle; I therefore desired that his foot might be denuded, in order that I might trace the line of the muscle throughout. At its insertion into the cuneiform bone there was an evident intumescence and induration, but without tenderness or inflammation. As it had never been painful, the gentleman had never supposed it to be of any consequence, nor had it ever been inquired after, or seen by the other surgeons.

To the best of his recollection there had been some fulness in that part of his foot ever since it had been much bruised by a fall from a horse, but though it had increased, it had done so imperceptibly. Knowing that my patient was an able artist in drawing, I offered to explain my notion of his complaint by a muscular table in Albinus. In this explication I encouraged him to hope, that, by discussing the swelling, the whole emaciated muscle, from admitting customary nutrition, would recover its action, plumpness, and strength.

By covering the affected part with a soap cerate plaster, and every night rubbing in half a drachm of the ung. hydrarg. the tumour disappeared in a few weeks. Clutton's febrifuge spirit was twice a day applied to the wasted part of the limb, which was also rubbed with a flesh-brush, and exercised.

Within two months a cure was completed, nor did the complaint ever return. It may be questioned, whether the extenuation had not increased from the limb having been preserved, both in Dublin and London, chiefly in a state of rest.

When from a dislocation, or any other cause, a limb is weak, inactive, and emaciated, local exercise highly contributes to the cure; and upon such principle, I have recommended bandages with elastic wires, to give motion, as well as support, to the affected parts. (See London Medical Journal, Index, vol. xi.)

The source of diseases may not, when first seen, be as clear as afterwards, which may call for repeated investigation to prevent a latent cause being overlooked. As men of eminence, from their accustomed intuitive skill, sometimes risk hasty and incautious decisions, their failure should rather animate less experienced juniors not to be dismayed, but to exert their utmost abilities. As the linimentum bituminis ammoniatum of the Pharm. Chirurg. will sometimes remove ganglions, I should esteem it a likely remedy for discussing a similar intumescence, should the ung. hydrarg. fail or be deemed ineligible. Cold bathing, electricity, and various embrocations, had been applied to the leg, on the inefficacy of which it appears to be unnecessary to enlarge, as it clearly depended on the seat of the malady not having been ascertained.

January 30, 1803.

P.S. The case I communicated to Mr. Pearson, in your 7th vol. p. 49, remained well, and the health was re-established. The young lady lately died of a fever.

An uncommon Affection *in a* Limb, *from an apparent slight Accident; by Mr.* James Lucas, *of Conisbrough, Member of the College of Surgeons in London.*

Miss F. in the twenty-third year of her age, after having walked in snow, and neglected to change her dress, was seized with fever and sore throat succeeded not long after by pains in the arms and knees. Before these complaints were removed, and being in a weak state, she had the misfortune, from her foot having been entangled in her cloaths, to fall forwards upon the chamber floor. She became unable to reach the bed without help, and passed a very restless night. The next morning she had so much pain in the hip, that is was necessary to ascertain whether any material injury had ensued. The limb admitted of every natural motion, and I was perfectly convinced that there was neither dislocation nor fracture. In ten days the pain and stiffness being considerably abated, she attempted to walk, and observed that the weakness of the hip joint excited a dread of falling.

Electricity, embrocations, frictions, riding on horseback, and internally bark and steel, were diligently tried, yet in two or three weeks, there being scarcely any perceptible amendment as to her lameness, she became very much dispirited, and particularly on being convinced of the following circumstances by her own experiments.

"When she walked she was obliged to describe a half circle, as those do who wear artificial legs that are made longer than they ought to be; in standing as strait as she could, the lame hip was higher, and the knee turned outward; in a sitting posture, with the limbs placed upon a sopha, by a tape measure the sound limb was unquestionably shorter, yet, by pressing the foot on the lame side against the sopha, she could make the length of the limbs exactly alike."

At the head of the femur, and of the great trochanter, instead of the natural prominence, there was also an unusual hollowness.

Being at that time a young practitioner, I so far sympathized with the anxious apprehension of my patient, as secretly to blame myself for not having been more inquisitive as to the progress of this malady. On mature deliberation I began to be more emboldened, predicting that these

these signs might be owing to a relaxation of the ligament, allowing the head of the femur to slip down upon the inner and lower edge of the acetabulum; that the effects of such an accident might be more violent, from the habit having been disposed to rheumatism, and having been weakened by indisposition; that, considering her youth, there was every reason to hope for eventual success.

The first examination had been satisfactory, the motions of the limb had, throughout the complaint, and at present, afforded strong proofs that there had never existed either fracture or luxation.

She became by degrees more confident in the expectation of a cure; and when she began to be sensibly better, she could in ten days walk with ease, all the formidable symptoms gradually vanished, and in a week or two more she was perfectly well.

The most sudden and effectual relief appeared to be received by a warm plaister, which eventually proved vesicatory. (Emp. commun, ℥j. pulv. euphorb. emp. canthar-rid. aa. ʒj. m.)

In the course of near thirty years practice, I do not recollect to have met with more than one somewhat similar case; where a gentleman, of nearly the same age, during rheumatism after a typhus fever, had a slip, but did not fall, which was succeeded by a protraction, and other like appearances, with a lameness, which was not so tedious, and seemed to admit of remedy by local exercise of the limb, in the manner recommended by Buzzalio for gouty patients. When I was at Bath, I saw an electrical machine, well calculated for weak limbs being exercised and electrified at the same time.

The favourable termination of such cases should encourage professors of the art not to relax in their endeavours to invent probable remedies, lest invalids should be driven to have mischief done by the more violent measures of ignorant pretenders.

Experiments

Experiments on Galvanic Contractions *excited upon warm and principally upon cold blooded Animals; by* Martin Tupper, *of Exeter College, Oxford.*

[Continued from our last, pp. 324.]

Exp. 14. Galvanic contractions were excited when the armature of the nerves was rubbed with metal, provided a nerve was at the same time touched with it. In these experiments the nerve should be sufficiently long to prevent the contact of the muscle with their armature. When the nerves were placed on glass, or on any other non-exciting substance, and treated in a similar manner, no effects whatever ensued when the limbs had been prepared some time, but the contractions took place when the nerves were replaced on their armature. Contractions were frequently excited when the armature of the nerves was alone rubbed with metal, but such contractions were equally strong when the limbs, nerves, or armatures were touched, or rubbed with the finger, glass, amber, &c. and therefore depended upon simple mechanical irritation.

When the two axillary nerves and the upper limbs were armed, and one of the former was held in the steel forceps and treated in the manner before mentioned, the contractions were very strong in the two limbs, but they were much more powerful in that limb, the nerve of which was at rest upon its armature.

Exp. 15. It has been asserted that muscular contractions were produced when a bar of zinc was dropped upon the armature of the nerves, composed of the same metal. I have repeatedly tried experiments of this nature, and have diversified them in many ways, but never with the success that has been mentioned; I however, at an early period of these experiments, supposed that positive effects had been produced when the sciatic nerves and the lower limbs of a frog had been disposed on their respective armatures, and the armature of the former was rubbed with one extremity of the silver excitatory arc. But it was soon observed, that the plate of glass upon which the apparatus was disposed, and upon which the other extremity of the arc rested was slightly moist on its surface; and this experiment having been repeated when all moisture had been excluded, the effects were negative. I have obtained positive results by dropping a bar of zinc or of silver upon the

the armature of the nerves, when one end of either of the two metals was in contact with a circle of water that communicated with the silver armature; I have likewise always been successful when I touched a moist part of the zinc armature with any metal, provided that a circle of water was continued as far as the silver armature; but whenever that was in any manner interrupted, no effects whatever were produced. It appears probable that the mechanical concussion excited in the limbs by the contact of the two metals was sufficient to excite contractions in the muscles, which may have been mistaken for Galvanic effects. I have frequently observed when the nerves and limbs of different animals were disposed upon their respective armatures, that the simple agitation of the table has often produced very violent contractions; and in such instances the same effects took place if the armature of the nerves or of the muscles was struck with any metal.

Exp. 16. The friction of the two extremities of the excitatory arc upon the armatures increases the force of Galvanic contractions very much, especially when the limbs are in a state of weak excitement. Let the nerves and limbs be armed, and let each extremity of the silver arc be very gently made to complete the circle, and no contractions will be excited; but if when the circle is thus completed, either end of the arc be slightly rubbed against the armatures, the results will at once be positive. It cannot be supposed that so slight a friction can produce a degree of heat sufficient to cause this difference in the results; and indeed, the following experiment, in which an arc of water was made use of, in some degree strengthens the doubt. Having placed the armatures upon which the lower limbs and sciatic nerves of a frog were disposed, at the distance of about one-twelfth of an inch from one another, I let fall a drop of water from some height upon them, and very strong contractions were the immediate consequence in the two limbs; but when it was gently dropped, no effects whatever were produced. The simple vibration produced amongst the particles of the metals had no influence over these effects, for when a piece of glass, amber, or wax, was rubbed or struck against the two armatures at the same time, no effect whatever was produced.

Exp. 17. Galvanic contractions are stronger when the wire in the compound excitatory arc is firmly grasped than when it is slightly held in the hand.

Having composed an excitatory arc of a bar of steel, my

my body, and a metallic wire, it was invariably found that the greater contact of skin with the metal did not produce this effect, for when the wire was firmly held between the finger and thumb the contractions were much more powerful than when the wire was laid upon the whole length of the naked arm.

Exp. 18. Positive effects are produced when the same metal is made use of in the armatures and excitatory arc. This fact is opposed to the opinion of some philosophers, who have founded a theory upon the necessity of heterogeneity of metals for positive results in Galvanic experiments. I have produced strong contractions in experiments of this kind with quicksilver, zinc, silver, gold, and polished steel.

Exp. 19. Galvanic contractions are continued for a considerable time when the excitatory arc is rubbed without intermission against the armatures. Having disposed the lower limbs and sciatic nerves of a very excitable frog upon their respective armatures, and proceeding in the manner just mentioned, I found that after eleven minutes, the contractions had become considerably weaker; after fourteen they were only partial; after sixteen minutes they had ceased altogether, and could not then be reproduced, unless one end of the silver arc touched any particular muscle, when that alone was excited. When the limbs had rested ten minutes, partial and feeble contractions could be excited; after fourteen minutes they had become a little stronger; after thirty the results had become positive in the two limbs; and after the expiration of forty-two minutes, the muscles had re-accumulated as much excitability as they were capable of at that period of time after death.

Exp. 20. I have produced tolerably strong contractions by arming and exciting the lower extremities of a toad, twenty-six hours after death. The dissected nerves and the toes were so dried up as to be easily crumbled between the fingers, and it appeared that putrefaction had already commenced between the thighs.

Exp. 21. When the sciatic nerves of a frog were armed with gold, and the limbs with zinc, and the circle was completed with iron, silver, or brass, the effects were very powerful; but when the limbs were armed with silver, and the communication was effected as before, the contractions

were

were comparatively feeble. The nerves and limbs being armed with gold, and the circle being completed with an iron, brass, or silver arc, the effects were tolerably strong. When one point of the iron, brass, or silver arc was gently carried over the limbs till it touched their (gold) armature (the other point resting upon the armature of the nerves) the effects were very strong, and in some respects different from those which are produced when the armatures consist of zinc or silver, or of any other metal except gold; the contractions and relaxations of the muscles in experiments of this kind are extremely quick in succession, they appear rather to flutter than to be affected by the usual strong spasmodic contractions. It has sometimes happened that the results have been negative, when steel, silver, or brass completed the circle upon two gold armatures, whilst at other times they have been positive under apparently similar circumstances. Sometimes no effects were produced when the arc was placed in contact with the (gold) armature of the nerves and with the muscles, whilst they were very strong when the arc was brought into contact with the two armatures; and again, contractions have, in some animals, been excited only when the excitatory arc was connected with the armature of the nerves, and with a piece of muscle placed upon the armature of the limbs. The above facts, which are apparently so contradictory to one another, were made upon animals as nearly as possible of equal degrees of excitability, and with the same pieces of metal.

Exp. 22. *Of the conducting Powers of Charcoal and Coke.*

It is by no means difficult to excite Galvanic contractions in the limbs of animals, when the nerves and muscles are armed with either of the above substances, and the circle is completed from each armature with a metallic excitatory arc. It is necessary however that the charcoal, whether vegetable or mineral, should have been recently and accurately burnt; I tried several pieces of the common charcoal, but succeeded only once in producing contractions when such was employed, but having very carefully charred a piece of deal wood, and proceeding in the usual manner, the effects were very positive, and nearly as strong as I have ever seen them in experiments in which the nerves and muscles were armed with metal.

Some philosophers are of opinion that the non-conducting powers of fresh vegetables, and of common coal, depend upon the hydrogen which forms one of their constituent

tuent parts, and which so modifies the carbon as to produce a substance totally insulant. Many experiments however throw some doubts upon this opinion: thus, common charcoal, after having been exposed to heat in close vessels for a considerable time, is almost invariably insulant; and Humboldt has found that the dry carious part of trees was a perfect conductor, although no traces of charcoal could be observed about it. The black lines also which are observed in wood that has been long exposed to water, as well as the charry matter which results from the decomposition of wood by the action of the sulphuric or nitric acids upon it, are perfect insulants in the Galvanic circle.

Exp. 23. *Of Galvanic Contractions excited under Water.*

The sciatic nerves and the lower extremities of a frog, having been armed and immersed in water, the contractions were very strong when the circle was completed. If the upper half of the limbs, together with the nerves and their armature, were held out of the water, the lower half remaining immersed, and the circle was completed from the armature of the nerves to the surface of the water, the effects were likewise positive. When the lower half of the limbs was immersed in water, with which they were connected by seven pieces of brass wire, as many glasses filled also with water, and the circle was completed with a metallic arc from the armature of the nerves to the water in the last glass, the contractions were very powerful in the two limbs. When the arc touched the brass wire, which connected the portions of water together, the effects were more powerful than when the water itself was the substance in contact with the arc.

Exp. 24. *Of the Influence of Galvanism over the involuntary Muscles.*

Some philosophers are of opinion that Galvanism has no effect whatever on the involuntary muscles, and that consequently neither the heart nor the muscular fibres of the intestines can be excited either to more violent or more frequent contractions by using the metallic plates, or even the pile itself. I have repeatedly made experiments on this subject, and have perfectly succeeded in increasing the number and strength of the pulsations of the hearts of cold blooded animals, and more particularly of the auricles, by proceeding in the usual manner with the metallic plates. In several instances the pulsations were increased from between 18 and 22, to between 26 and 30 in a minute; and in

in one experiment they were increased from 22 to 35. It could not be suspected that mechanical irritation produced these effects, for the points of the metallic arc were not brought into contact with the heart itself but only with the smooth armatures upon which it was laid. In experiments upon this organ it generally happens that its actions may be renewed when they have ceased for some time, and they often continue for one or two minutes after the excitatory arc has been removed from the armatures. I have not attempted to galvanize the hearts of warm blooded animals, and I believe it is doubted by philosophers of the first eminence in this science whether that organ in this class of animals be susceptible of the Galvanic influence; Dr. Fowler however made some experiments, in which I believe he fully succeeded in increasing both the force and frequency of pulsations; and I have frequently excited very strong peristaltic motions in the intestines and stomachs of oxen and of sheep by simply using a silver and zinc plate, and a silver excitatory arc.

EXP. 25. *Of the Sensations of Light excited by disposing Metallic Substances in various Ways.*

It will not be my object to enumerate the effects which are excited in the different organs by the application and connection of metals to various parts of the ramifications of the same nerve, nor the powerful shocks excited by the pile upon different parts of the body; I will very briefly state that the sensation of light may be excited in four ways: First, by applying one piece of metal to the Schneiderian membrane of the nose, the other to either of the eyes. Secondly, or, one to the gum of the upper jaw, the other to the tongue. Thirdly, or, one to the tongue, the other to either of the eyes. And fourthly, by applying one armature to each eye, and producing a communication between them by any metallic substance.

It is difficult to explain in what manner the contact of metals placed as above mentioned produces the sensation of light. There is, I believe, no communication between the internal nasal branch, nor the twigs of the superior maxillary nerve which are distributed to the gums of the upper jaw, nor between the true gustatory, nor gustatory and the optic nerve; nor between the tunica conjunctiva (the only part of the eye to which the armature can be applied) and the same nerve, except it be by the medium of the ciliary plexus which is in part formed from the first branch of the fifth pair of nerves, which branch also supplies

plies the tunica conjunctiva. Granting however that nervous communication existed, the phænomena of excited light in the retina could not be explained by it any more than those of excited contractions in the muscles by the armatures and the excitatory arc.

Exp. 26. *Of the conducting and non-conducting Powers of various Substances.*

In the following enumeration, the liquids made use of were contained in small glass tubes having a moveable wire at each extremity, and which could be approximated at pleasure.

My experiments on this subject have led me to conclude with others, that great differences exist in the conducting powers of the various liquids and solids, but that the appreciation of their effects in the arc is extremely difficult, since we can only arrive at a true comparison of them, by observing the phenomena upon animals; these often present so many unforeseen effects, and are so differently affected by the Galvanic influence, although apparently of equal degrees of excitability, that the point cannot be ascertained with precision.

All the metals, and nerves organically united to the body without any contact whatever of metals, are exciters.

The following substances are passive or simply conductors, though some of them may possibly be exciters under extreme degrees of excitability: The living human body; newly burnt charcoal and coke; muscular flesh of all kinds, whether raw, boiled, or dried; water, alkohol, the saturated solutions of the alkalies in water, the ethers, the acids, the solutions of gums in water, of gum resins in proof spirit, and of resins in rectified spirits of wine, liquid soap made either with the fixed or the volatile alkalies, blood, milk, urine, bile, saliva, &c.

The following substances are non-conductors, viz. dried cuticle, common charcoal, mineral coal, dry wood, cork, wax, amber, glass, butter, the essential oils, the fixed oils, sugar, soot, flax, paper, cotton, &c.

New Burlington Street, February 7, 1803.

On

On the Urinary Stones *and* Calculi *in* Men; *by* Cit. Fourcroy.

[Concluded from Vol. vii. pp. 60—66.]

Sect. 5. *On the dissolvents of urinary calculi.* Every thing which has been said or proposed concerning the dissolution of urinary concretions, contained in the bladder of men, and in the urinary passages, must have been inaccurate, till analysis had thrown light on their nature and difference; and though accident has discovered some remedies, adapted to a certain species of calculi, as, the remedy of Mrs. Stephens, the lime water of Mr. Whyte, the caustic lye of Hartley, yet it appears evident, that these celebrated remedies will prove inefficacious in stones originating from terreous phosphats and oxalats of lime, and merely be of service in calculi arising from lithic or uric acid and urats of ammonia. It would be equally superfluous and tedious to prosecute the long series of errors, prejudices and hypotheses, with which the annals of medicine are overspread with respect to the different lithontriptics from the earliest times of the Greek school to the present age. There is hardly a natural substance which we do not find in this extensive catalogue, particularly mineral waters, decoction of plants, sometimes of the most useless; and our researches will confirm the sad observation, so long time since experienced, that the human mind must advance through errors to find the path of truth. In the present age, however, the lithontriptics so much boasted of are disregarded, and their power is discredited, formerly supposed to be fully efficacious, notwithstanding their long passage through the organs of digestion; and it is almost generally acknowledged, that if there is any hope of dissolving calculi, the remedies should be immediately introduced into the bladder through the urethra; on which circumstance the success of Stephens's, Whyte's and Guthrie's remedies seems equally to depend. Repeated experience will probably remove or diminish the fear of danger, that might arise from the sensibility of the parts. Every other way of employing lithontriptics, besides the inconvenience of a long and unmeasurable passage, is attended with so many accidents, capable of diminishing the energy of lithontriptics in the organs they are to pass through, before they arrive at the calculus, that their intended success is mostly frustrated. According to the present state of our knowledge, three or four substances are sufficient for dissolving all species and strata

strata of calculous concretions. The lyes of caustic kali and natron, so much diluted as to be suffered in the mouth and swallowed, are able to soften, liquefy, and to dissolve the lithic acid within a few days, or the small calculi and pieces of the larger ones, if they are put into them. This is likewise the case with urats of ammonia. Nitric and muriatic acid, very much diluted, so as to be not much sharper than urine itself, soften and dissolve still better phosphat of lime and of ammoniacal magnesia; and if these substances are hung by means of a thread in these acids, they become light, swim on the surface, and leave behind transparent flakes, similar to the slimy textures which swim on the surface of the liquor. The presence of uric acid in the lye of potash manifests itself by the addition of a weak acid and even of vinegar, which precipitates it in form of a white powder, and the presence of phosphats by the ammonia, which separate them. Stones consisting of oxalat of lime, and resembling mulberries, are only with difficulty soluble in weak reagents. They are however, softened and almost wholly liquefied in diluted nitric acid, and nothing but a spongy and brownish animal matter remains; but they require a longer time for their solution than the preceding ones. We likewise succeed in dissolving them by means of a lye of carbonat of kali or natron, which by a double affinity decomposes the phosphat of lime; carbonat of lime is thus precipitated from the liquor, in which the oxalat of kali or of natron remains dissolved. It appears therefore, that either of the above mentioned liquid reagents is to act on the calculus and to dissolve it on being injected into the bladder, if no obstacle be opposed to its operation; but here we meet with several difficulties, which it is necessary to know, in order to be able to remove them. The first is, to determine the nature of the calculus, the differences and strata of which may obstruct the successful application of lithontripties, a circumstance which cannot be avoided but by a proper choice of the remedies, founded on the knowledge of these concretions and their nature. The second difficulty consists in limiting the action of the remedy on the calculus, and in defending the bladder from its attack. The third relates to the mixture of the reagent with the urine, which is capable of modifying, and even of annihilating its effects, and may be attended with inconveniences prejudicial to its operation on the calculus. We shall trace each of these difficulties, and endeavour to prove, that they oppose no insuperable impediments to the solution

tion of urinary calculi in men. There are very few expedients, by which we may ascertain from without the nature of urinary concretions, and though the introduction of the catheter is able to inform us of their size, hardness and surface, we can never become acquainted by these means with their composition. No symptom throws light on this subject; and indeed, the difference of the particles composing a calculus, seems to have been utterly disregarded in surgery. The idea of a lithontriptic has never been grounded on the different nature of these concretions, as ought to have been done. Under these circumstances, as the art preserves an absolute silence on this subject, we have thought, that the examination of the urine of calculous persons might furnish us with some ideas on the species of calculi, suspecting that this urine must contain that substance in a less proportion, which it continually accumulates on the exterior of urinary concretions. The examination of the urine from two calculous persons has shown a very perceptible diminution, and almost a total absence of uric acid, which is generally contained in healthy urine; and this circumstance led us to conclude, that their calculi were formed of uric acid. In one, who died of age and infirmity, we actually discovered a stone, consisting of lithic acid. This subject, however, is still so new, that it needs farther enquiries, to confirm or suppress this opinion. The gravel excerned before the symptoms of a calculus appear manifest, may furnish a hint with regard to the nature of this calculus, and our knowledge may be assisted by the calculis, that are shown in families, where they have been evacuated in a natural manner or extracted by an operation, as it is probable that the hereditary disposition towards this disease is owing to one and the same cause, and that consequently the calculous matter, which occurs in one of them, may be likewise one and the same in others of the family. It is to be suggested that amongst all calculous substances, the uric acid and the urats of ammonia are most frequently met with, so as to form at least one-third of all human calculi; while the other two-thirds are constituted by the remaining three substances, viz. the two terreous phosphats and the oxalat of kali; as the siliceous earth, on account of its rarity, deserves hardly to be mentioned; whence it appears, that we have often ground for choosing the lye of kali as a lithontriptic. The continued use of the injections of this remedy does not leave us long undetermined concerning its effect and the nature of the calculus, and in proportion as the symptoms

symptoms abate and the size of the calculus decreases, we are confirmed in the nature of the concretion and the choice of the remedy. In the opposite case, however, we ought to have recourse to acids. There is another expedient for ascertaining the nature of urinary calculi and of determining the dissolvent, that is, to examine the remedy a quarter of an hour after its having been injected. On employing a diluted solution, which, however, we know is capable of dissolving concretions of uric acid, we are to collect the liquor after its having remained in the bladder for half an hour or three quarters of an hour, and suffer it to depose the flakes which are mixed with it; and having filtrated it through blossom paper, add some muriatic acid. If the liquor has acted on a calculus of uric acid, and commenced its solution, the muriatic acid will produce a considerable white precipitation. This experiment being continued for several days one after another, and after every injection, will enable us to determine the nature of the acid in the calculus, and even the quantity of the acid which is disengaged from the stone, till the fortunate moment when the disappearance of all symptoms, occasioned by the presence of the calculus, the probe, and the absence of uric acid in the injected liquor, announce and ascertain the total solution of the calculus. Whence it appears evident, that if the alkaline liquor betrays no traces of uric acid, tried in the above manner for several days, and if the symptoms of the calculus do not abate, we have every reason to suppose, that the calculus is not composed of uric acid, and that we must consequently resort to the application of diluted muriatic acid, for the purpose of dissolving this calculus. This acid acts expeditiously on phosphats, and will soon prove efficacious, if the calculus or some of its strata should be composed of them On adding a few drops of a solution of ammonia or kali, a white precipitation of phosphat of lime will be produced, which is separated from the acid by means of the alkali. In this case the symptoms will abate with the diminution of the calculus, which is easily performed by the muriatic acid, in which the phosphats are more soluble than in any other acid. If the stone be formed by two substances, alternately placed one over another, the injected acid will sometimes become no farther efficacious, as is found by the addition of ammonia yielding no precipitation, and then the alkaline lyes should be again employed. The diagnosis of the mulberry-like stones, is attended with still greater difficulties, and we discover no other traces of oxalat of lime in the urine,

urine, but its being turbid on passing out of the bladder. By analysis we might expect to find in the precipitation oxalat of lime. However, no such urine has been found and analysed in calculous persons. We do not deny the possibility of discovering it in the urine of calculous persons, issuing from the bladder as a turbid liquor, although a continued examination of the urine of calculous persons will be necessary, undertaken with great care, and through a long series of experiments. In this manner we may perhaps be informed, whether a calculus of oxalat of lime is to be discovered by the analysis of the urine, and whether it may be dissolved by nitric acid and carbonat of kali, as it is done out of the body. Not without much reason it has been apprehended, that the liquors acting on the urinary concretions, might attack the membranes of the bladder and destroy its organization, instead of dissolving the calculi; but such an accident may be easily avoided, as will appear from my experiments. A solution of kali and the acids were so much diluted by water, that they could be suffered in the mouth without any inconvenience, and no greater irritation of the bladder was produced by them than by common urine. I have seen six persons, who had used the alkaline injections, without experiencing any pain or disagreeable sensations arising from the liquor being detained in the bladder. The bladder, however, became more sensible when a weak muriatic acid had been injected, and the irritation thence arising, did not suffer the liquor to remain long in the bladder; but fortunately the muriatic acid, even when extremely diluted, easily dissolves the phosphatic stones, without being for so long a time in contact with them, as is required in the action of alkali on the uric acid. The action, which the lithontriptics and the urine exert upon each other, remains still to be considered. The alkali must meet with free phosphoric and uric acid, by which it is absorbed or saturated, before it can act on the calculus, and in this manner the urine becomes an impediment to its action. There are, however, two expedients to remedy this inconvenience; the first is, to let the urine be evacuated before the injection is made, and to inject previously luke-warm water. The liquor, however, may be weakened by the urine issuing from the ureters; but this is counteracted by the second remedy, or, by letting the patient drink a very diluted solution of kali. The experiments made at Paris and Dijon, shewed, several days after, the use of the pure alkali given internally; the urine became rather alkaline, lost its acidity, and obtained a similar nature to that of the injected liquor.

liquor. It has even been hoped, that we might render the urine so alkaline as to dissolve the stone; and though we cannot conceive that this method will succeed in dissolving great calculi, yet it may be of great service in the gravel of the kidneys, and in hindering the increase of calculi, and in promoting the effect of alkaline injections. There is another inconveniency attending the mixture of urine, and of the injected liquors in the bladder. The former being acid and saturated with the lye, deposes a gelatinous substance in form of slimy flakes, which frequently obstruct the orifices of the catheter, from which they must be removed by means of a wire. The muriatic acid never occasions any of these inconveniences; it renders the urine clearer, and even prevents the deposition of the slimy matter.

The liquors to be injected, ought to have a temperature of 25° Reaum. A catheter of gum elastic and a syringe of tin are the apparatus necessary for this operation. In the beginning it is sufficient to make the injection three or four times a day, afterwards six or eight times, and the liquor is suffered to remain in the bladder for a period not less than a quarter of an hour. The injections must be continued for some time, and the catheter remain in the urethra, that the patient may be enabled to make the injections himself, which he learns to do without difficulty. It is advisable to throw warm water into the bladder after every injection.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

CONCEIVING that accounts of cases similar to the one I am going to lay before you, are not very frequent, and that the modes of preventing, or rather obviating the effects of active poisons introduced into the stomach, are not very generally understood, either from their infrequency, or practitioners of medicine not being called in sufficient time to venture upon the exhibition of remedies: I have taken the liberty of submitting one I was called to the other day, to your perusal; and wish, if you think it sufficiently important, it may have a place in your very useful and widely circulated Journal.

On the 31st of January last, I was called to Mary Ryford, aged twenty-four, of this town, whom the messenger represented

represented to be dying, and in violent agonies. On visiting her, I found she was perfectly senseless, her pulse slow and feeble, extremities cold, her eyes staring, with the pupils much dilated, and discharging tears profusely, her countenance extremely swelled and bloated.

Upon enquiry, I found that she had about two hours previous to my seeing her, swallowed ten or twelve pills, which had been given her by a young man for the cure of syphilis. I immediately made application to the druggist, who had prepared them; and desiring to see the prescription, I found that each pill contained half a grain of the *oxygenated muriate of mercury*, and the same quantity of gamboge. Having obtained this information, I proceeded, agreeably to the account of some cases I had recollected to have seen, to give her some kali, of which I dissolved half an ounce in two ounces of water, and gave her a spoonful as frequently as I conveniently could; but I was obliged to keep the handle of a knife between her teeth, as otherwise they were so closely locked as to preclude my doing any thing. I continued this treatment for the space of an hour and a half, when a slight vomiting with a diarrhœa came on, and I was happy to perceive that she continued from that time to recover, although she complained much of severe pains in her stomach, terrible heat in her throat, constant cough, &c. But these symptoms gave way to warm, soft gruel, solutions of gum arabic, and diluting drinks of a similar nature, so that in a few days she was perfectly recovered.

This case amongst too many others, shews the horrid ills resulting from a practice which is daily increasing in this country, viz. that class of men under the denomination of druggists being permitted to make up, vend, and *even prescribe* medicines for the cure of diseases. It is true this young woman took the pills in a moment of despair; but we cannot say that they were prepared correctly, and we are certain that the dose was much beyond what is common to prescribe of so powerful and violent a medicine; she was directed to take one, night and morning.

I am, &c.

R. NUNN,
Pupil to Mr. Newell.

Colchester, Feb. 8, 1803.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Avail myself of the means your excellent publication affords, to communicate to the public some improvement in the treatment of Scarlatina.

The feeble aid afforded by the Peruvian bark in this dangerous disease induced me to try the effect of Digitalis, and of its success I have happily many living proofs to produce.

Scarlatina and Angina Maligna (if they admit of distinction) have been the prevailing complaints in this place for the last eight months. Scarlatina has existed under every degree of violence, and a few cases have been marked with an unusual appearance of malignancy, the patient expiring in thirty-two hours from the period of the attack, while others struggled with the disease, ten or twelve days, and then sunk; the early stage of Scarlatina was here characterized by every symptom of a violently inflammatory affection, and in a few was purely so throughout; its generally rapid change however to a state of extreme debility, renders the successful treatment of it not a little difficult, and tends often to a fatal termination.

I have given the digitalis during every stage of scarlatina, but at no period have I found its effects so evidently salutary, as at that when the patient is sinking and exhausted from the previous violent strong arterial action; the pulse, rapid, feeble, and unequal, gains by its influence that steadiness and strength which marks the return of health, and prevents those anasarcous swellings which often succeed to other modes of treatment. The many facts produced to me during the exhibition of this remedy, leave no doubt on my mind, as to its specific powers at a certain period of scarlatina; and this will justify a hope that its use will become universal, and prove to practitioners a powerful means of effectually opposing the progress of this disease. How far the giving small doses of digitalis would be a security against the contagion of scarlatina, I have not attempted to ascertain; it is a subject, however, well worth investigating.

I remain, &c.

Derby,
January 29, 1803.

J. GILBERT.

An Account *of the* Rise, Progress, *and* Present State *of the* Pennsylvania Hospital; *the Pride of Philadelphia.*

THIS humane and benevolent Institution was founded by the Contributors, in the year 1752, for the relief of the lunatics and sick poor of Pennsylvania, and has been supported by them ever since, *with legacies and private contributions.*

By a late act of Assembly, the contributors have liberty to graft upon it, a Lying-in and Foundling Hospital, as soon as money sufficient to carry it on can be raised.

They consist of persons who have given ten pounds, or more, and are incorporated by the name and title of, *Contributors to the Pennsylvania Hospital;* such may vote at elections for managers, or be voted for, but derive no personal interest from the act of incorporation. A sum, less than ten pounds, is called a donation.

The contributors have perpetual succession, with power to elect twelve managers, a treasurer, and all other officers of the institution, and make Rules for well-ordering the house. They may receive and take the lands, hereditaments, and tenements, not exceeding the yearly value of one thousand pounds, of the gift, alienation, bequest or devise of any person or persons whomsoever, and of any goods and chattels whatsoever; provided, that *no general meeting of the contributors, or persons acting under them, shall employ any money or other estate, expressly given to the capital stock of the Hospital, in any other way than by applying its annual interest or rent towards the entertainment and care of the sick and distempered poor, that shall from time to time be brought and placed therein, for the cure of their diseases, from any part of the state, without partiality or preference.*

If there should not be a constant succession of contributors to meet yearly and chuse managers, then the hospital, its estate and affairs, and all the management thereof, are to be under the direction of such persons as the legislature may appoint.

By a law of the contributors, the power of directing the manner and terms of receiving and discharging patients, is transferred to the managers, who made a rule, if there should be room in the Hospital, (after as many poor patients are accommodated as the interest of the capital stock can support) to take in such others as they can on reasonable

rates

rates agree for; and that the profits arising from boarding and nursing such patients, shall be appropriated to the same uses as the interest money of the public Stock—The price of board is various, according to the applicants ability to pay, and changes with the rise and fall of provisions, &c.

The Overseers of the Poor of Pennsylvania, and religious societies therein, who support the poor by their own voluntary subscriptions, pay but *three dollars* a week, which is about the first cost of one person's maintenance, including medicine and all charges, except cloathing and funeral expences.

The overseers of the poor of other States pay *four dollars*; private patients, who are residents of Pennsylvania, from *three and a half to six dollars*; and non-residents from *four and a half to eight dollars*.—Every patient may chuse his own physician, but he must be one of the house physicians.

An amputation of a limb is not to be performed, unless the patient consents to it; nor then, unless three physicians agree to it, after a consultation on the case.

The sick, especially the stranger, finds it his interest to prefer the Hospital to any tavern, or boarding-house, for many reasons—

First, Because the physicians are the most eminent.

Secondly, The nurses are the most experienced.

Thirdly, The apartments are the most convenient.

Fourthly, The price of board is lower than any individual can take.—And,

Lastly, The patient has the satisfaction to know, if there is any profit it is given to the poor.

A physician of the Hospital must be twenty-seven years of age before he can be elected; and serve the poor gratis.

The duty of the resident apothecary is to attend the library, exhibit and explain the museum, administer prescriptions, and visit and dress the patients.

Two managers and physicians meet every fourth and seventh day in the Hospital (being market days) at eleven o'clock of the forenoon, to admit and discharge patients.

At intervening times, the applicant must repair to one of the monthly physicians, who, if he considers the case a proper one, will certify it in writing to the sitting Manager, and he will take the usual security, and give an order for admission.

Overseers of the poor from the country, who bring a patient, must have a certificate signed by the magistrates, denoting that they are in office, and the pauper proposed for admission resides in their district, or their application will be rejected.

Persons with infectious diseases are not to be received, nor incurable cases, lunatics excepted—but, any person living in or near Philadelphia, receiving by accident a desperate wound, or having a fractured limb, just broke, may be brought to the Hospital without an order, and he will be received day or night, *provided* he is brought in immediately.

From the time the hospital was founded there have been admitted into it about ten thousand patients, great numbers of whom have been lunatics; some of these have been twenty or thirty years in the house, (which is not uncommon for lunatics) hence arose the disagreeable necessity of limiting their number, so as not to take more than one half of the paupers of that class, who would occupy the whole house to the exclusion of other cases, which have an equal claim, the Hospital being an asylum not only for maniacs, but all others, except infectious diseases.

Besides ten thousand admitted, it is supposed nearly as many *out-patients* have been attended, from the Dispensary of this institution, and supplied with medicines gratis. These comprehended the poorest classes of people, afflicted with every disease to which the human frame is liable.

At the present time, there are ninety-three patients in the Hospital, of whom sixty-three are on pay, and thirty on the poor list; of the whole number, sixty-three are lunatics.

The buildings are nearly completed, and have cost, as they now stand, about *eighty-four thousand dollars*, towards which, at different times, the Legislature have given *sixty-six thousand dollars.*

Not the least doubt is entertained but they will pay the difference, finish the Hospital, and present it, *a State Contribution*, for the uses intended.

The Hospital exhibits in the centre, a house, sixty-four feet in front, elevated above all the adjoining buildings, and projecting beyond them a proper distance—on the top is a sky-light, to enlighten the theatre for surgical operations; from which there is a beautiful view of the City Plot, the river Germantown, Frankfort, the Fort, and several elegant country seats on the Schuylkill.—Two large stair

stair cases, leading to the several wards, are made in this division.

Adjoining hereunto on the east, is a ward, eighty feet front, twenty-seven feet deep, and three stories high; at the end, a wing crosses it, north and south, extending in length one hundred and ten feet.

In the middle of the wing, opposite the ward, is a hall, twenty-eight feet square, including a stair case, projecting beyond the other part of the wing, sufficient to cover the cornice, and raised one story above them, with a cupola that affords a secure way out in case of fire.

And adjoining to the centre house on the west, are a ward and wing, similar to those on the east, with this exception, that the wards are about thirty-four feet deep—this extension was agreed to, in order to admit double rows of rooms to accommodate a greater number of lunatics.—The difference, unless to an accurate observer, is scarcely perceivable.

The whole extent of the buildings from east to west, is two hundred and seventy-eight feet; by the length of the wing crossing the wards, the east and west fronts make an agreeable appearance. Detached from the Hospital, at a little distance, is a separate building, with a convenient enclosure for venereal patients, who are kept by themselves.—There are also, sundry other apartments on the lot, such as stable, ice-house, smoke-house, fire engine-house, &c.

Rooms in the Hospital are appropriated to the following uses.

For the library	1	Steward, matron & maids in the centre house	8
Contributors	1	Lunatics in the west wing and ward	70
Managers	1	Ditto in the east	16
Museum	1	For sick and wounded	28
Apothecary's shop	1		
Bathing Rooms	2		
Theatre for operations	1	In all wards and rooms.	130
Wash-house, bake-house and kitchens	4		
Cell-keeper and his wife	1		

The lunatics being separated by the centre house, the latter are not incommoded with their noise. The Capital Stock consists of ground rents, and money at interest, the annual amount of which is about three thousand four hundred dollars; besides this, there is no productive income for

for the support of poor patients, except the profit of pay patients, both of which sums united will not maintain more than thirty poor persons; nor can the number be increased, until by legacies, or future contributions, the funds are enlarged. This is much to be lamented, as every convenience is provided in the Hospital to accommodate three hundred persons on a moderate calculation; but for want of an adequate capital, the contributors are obliged to refuse to numbers, the benefits of an Institution, that is above all others in this part of the world, peculiarly well situated in other respects to relieve them.

The unproductive part of the estate consists in lots of ground bought and paid for by the contributors, and in the Museum and Medical Library.

These lots were mostly purchased early, when land was low, but they are now become valuable, being within the improved parts of the city.

The Hospital stands on a square, three hundred and ninety-six feet in width, and four hundred and sixty-eight feet in length, containing about four acres—round it is a brick wall, and rows of high forest trees. Within the wall, the ground is decorated with gardens, grass plots, gravel walks, hedges, &c.

There is also a vacant square to the east, and one half a square to the west—containing together, more than six acres, running in parallel lines with the ground on which the buildings are erected; the other half of this square is owned by the Alms-house, who mean to keep it always open, so that the Pennsylvania Hospital is situated in the middle of three great squares; which, besides the open streets, measure more than thirteen acres.

The contributors have, also, bought three lots on the south-side of the Hospital.—Their object in providing so much ground was to secure a current of air for the benefit of the sick patients. The policy of this provision was never more conspicuous than during the late fevers, particularly in 1793, when not a person took it in the Hospital, though upwards of four thousand died of it, in about four months, in the city, in that year.

Knowing the inestimable value of open ground to the Hospital, the contributors have a confident assurance, that avarice itself will never dare to propose the alienation of one foot of the ground, which they have provided at their own expence for such a benevolent use.

The Anatomical Museum is a collection of the human body in wax, fine paintings, &c. which may be worth three

three thousand dollars.—The paintings are the gift of the late Dr. John Fothergill, of London, valued at one thousand dollars. The other part was the property of the late Dr. Chovet, and purchased of his daughter with a life annuity of fifty pounds sterling per annum. Persons admitted to see this Museum, which is very interesting, pay one dollar each.

The Library comprises about seventeen hundred volumes of choice *Medical Books,* and is thought to be the best collection of the kind in this country; this, and the Museum, are enlarged and supported by a fund of about five hundred dollars per annum, which Medical pupils, who attend the lectures from all parts of the Continent, West Indies, &c. pay for the privilege of reading, and observing the practice of the house; the money is exclusively applied to enlarge the collection, with the consent of the Physicians, who, in other countries, enjoy these perquisites to themselves.

The number who attend the hospital at this season, are about one hundred.

The Managers, Treasurer, and Physicians, are all Contributors, and serve gratis, except that persons in affluence pay the Physicians, as they would if attended in private houses.

Such are the principles on which this institution has been raised and supported—and as it has been of the greatest utility to the public, it is hoped it will continue to excite their attention, until, by the enlargement of its funds, the contributors are enabled to extend the benefits of it to a greater number of poor, agreeably to the design of its pious Founders.

A MEMOIR *on the* NUTRITION *of the* FOETUS, *by* I. F. LOBSTIERE, *M. D. of the Medical School of Strasburgh, Member of several Societies, &c.; communicated by our Correspondent at Paris.*

WITH a view to elucidate many of the abstruse points which relate to the nutrition of the fœtus, Cit. Lobstiere has occupyed himself, particularly for some years, on this subject. The important situation which he fills in the school of Strasburgh, has given him frequent opportunities of observing the various changes which the viscera undergo

dergo during the period of gestation; he has been frequently able to verify what anatomists have already remarked of the disposition of the membranes of the placenta, and he has carried his enquiries into the state of other animals during this period, with a view to ascertain the relation which exists between the placenta and matrix, in order to draw a comparison between them and the human subject. In the examination of this question, two objects principally presented themselves to the author. The first is, to determine the nature, origin, and essential qualities of the fluid necessary to the nutrition of the fœtus. The second, to shew how this matter is conveyed to its destination. These two questions, though intimately connected in their nature, still establish the ground of decision of the Memoir which the author now offers to the public. The first part contains anatomical and physiological remarks on the membranes of the ovum and placenta, considered as the organs which furnish the matter of nourishment. The second is employed in the consideration of nutrition properly so called, or the passage of the matter of nourishment into the body of the fœtus. To determine how this matter is converted into the proper substance of the individual, does not enter into the author's plan. In the first part of this work, the author treats of the ovum and its membranes; he first gives a description of the decidua, and indicates its relations with the uterus and ovum; he examines its appearances through the microscope, and gives a history of its organization in the cow and sheep; he next enquires, whether or not it exists in the matrix in the unimpregnated state, whence its origin, and in what it differs from the false membranes? He investigates the structure of the chorion, he discusses the question of its vascularity, and how far it is analogous to other diaphanous exhaling membranes, and points out its connexion with the placenta. In speaking of the amnios and its structure, the author seems to think, that the existence of a space filled with water, as many anatomists have thought, is not fully demonstrated, and that when these waters are found they are the effect of disease, and not a natural appearance. The vital powers of the membranes of the ovum, as well as the question whether or not they are derived from the mother or fœtus, engage his enquiry; he shews the differences which exist in this respect in different kinds of animals, and looks on it as highly probable the opinion which gives to these membranes the same powers as diaphonous membranes in other parts of the body, and shews their functions

to

to be the same as other exhaling membranes. He enquires into the source of the liquor amnii, and he explains by those facts already ascertained, why this water is accumulated, and how it is renewed. Speaking on this point, he makes a digression on the origin of the caseous matter covering the skin of the fœtus, and thinks, contrary to the generally received opinion, that this is a secretion made by the skin of the fœtus at a certain period of gestation. He draws, at length, some physiological consequences from the known disposition of the membranes of the ovum. The existence of the alantois has been admitted by some anatomists, and contested by others. The author thinks, however, that, "if we reflect on the light thrown on the structure of the ovum by modern enquirers during the first periods of pregnancy, it is probable that those anatomists who have described an alantois in the human subject, are not wrong; nay, that it is probable that it is to this part they have given the name of vesicula umbilicalis." As this latter is as yet but little known, and has not met with all the attention it deserves, the author details a number of observations that have been made on this body, and adds some curious remarks, the fruit of his own experience. According to him, there exists the most complete analogy between the vesicula umbilicalis and alantois, in birds and quadrupeds; and to support this analogy, he enters into some details in comparative anatomy, from which he concludes, that the use of the alantois is not, as has been supposed hitherto, a reservoir of urine. The author next describes the placenta at the different periods of pregnancy. In describing the spongy membrane which covers the uterine surface of the placenta, he shews that the existence of this membrane does not date from the earliest periods of gestation. The structure, connexions, and uses of the parts engage a considerable portion of the author's attention, and he refutes the opinion of the anastomosis of the vessels of the uterus and placenta; considering the opinions relative to the passage of the blood from the mother to the infant by absorption, he asserts that this absorption does not take place at every period of pregnancy, and that the valvular vessels, such as Reuss has described them, do not exist in the placenta. According to our author, the connexion of the uterus and placenta are not the same throughout the state of pregnancy, but that it differs at different periods. This first part is terminated by researches on the umbilical cord; and he quotes the experiments of Hunter on the contractility of these vessels, and concludes by observing

that

that the vital powers of the placenta are derived from the mother.

• In the second part, the author treats of the nutrition of the fœtus, the opinions on which he discusses in the three following questions. 1st. Is the fœtus nourished by the liquor amnii? 2d. Does it draw its nourishment from the placenta? Or, 3dly, Are these two sources united at one and the same time, in affording the matter of increase? And if in the first case, is the matter taken in by the mouth or absorbed by lymphatics of the surface? After giving the various opinions in support of these several questions, the author gives his own reasons for thinking the fœtus nourished by the liquor amnii, and taken in by cutaneous absorption. He here digresses, by enquiring into the nature of the caseous matter covering the surface of the fœtus; he gives his ideas on the sebaceous glands of the skin, which he considers as the source of this secretion. He undertakes to shew that the structure and uses of the placenta differ according to the period of gestation, and he has recourse both to human and comparative anatomy, to shew those changes which take place in the earlier periods. The author establishes an analogy between the structure of the cotyledons of quadrupeds, the umbilical vessels of the chick, and the human placenta; and he shews from observations which he has made, that the umbilical veins are formed before the umbilical arteries, that in so much as the veins are the only vessels of the placenta, they perform the function of absorption, and that they convey a milky fluid which is thrown out during the first periods of pregnancy, between the matrix and placenta.

A French reviewer, who reviews these opinions as highly probable, observes, that by adopting these observations of Cit. Lobstiere, we may explain, 1st, The facility with which the umbilical vessels degenerate into hydatid vesiculæ. 2d. Why the vessels of the placenta, even those of the fœtus, have been injected from those of the matrix. The author shews afterwards, from analogy, that the umbilical arteries, though formed after the veins, yet anastamose with these vessels. After giving the various opinions on the functions of the placenta during the latter periods of pregnancy, the author draws a parallel between the functions of the lungs and those of the placenta; he asserts that the blood acquires a new stimulating quality in the placenta, and points out the analogy which he conceives to exist between the pulmonary and placental circulation. C. Lobstiere thinks that the stimulus acquired in the

the placenta is caloric; and he examines the question why the temperature of the fœtus is less than that of the mother? Why the heart in the fœtus is stimulated in the first periods of pregnancy? and whether or not the fœtal blood undergoes any depuration in the placenta? It appears to our author probable that this depuration takes place in the liver, in the intestines, and even in the cutaneous organs. With respect to the vesicula umbilicalis, he thinks that it is subservient to the nutrition of the embryo, and he compares it to the cotyledons of plants; he even thinks that the albuminous matter of the umbilical cord is a source of nourishment to the fœtus. After pointing out the reasons why the growth of the fœtus in all animals is slower towards the latter period, he concludes his work by some considerations on the causes which lead to parturition, and on those which produce the separation of the placenta. With respect to the first, he thinks that we should not attribute the expulsion of the human fœtus wholly to that particular disposition of the matrix, by which its fibres, as well those of the body as of the neck of the womb, and which through the previous periods are in a state of antagonization, become so affected as that, at the approach of labour, the fibres of the body become more powerful than those of the neck; but he thinks, though this opinion may be true, that yet we should admit as an accessary cause, a power existing in the fœtus itself, which no longer finding a sufficient quantity of matter of nourishment, exerts itself to quit the matrix, and by this means excites it to contraction. "The fœtus in this case, says the author, does no more than a plant, which turns from an ungrateful soil, and looks for one more favourable. It is, he says, no more than we see in birds. The chick breaks the shell which confines it, because its nutrition is exhausted, and because its confined situation is no longer commodious." This work is accompanied by two engravings, which render it more intelligible and interesting. The first plate represents an ovum at the 50th day of pregnancy; the membranes are divided, in order to shew the embryo and vesicula umbilicalis. The second plate shews the vascularity of a portion of a full grown placenta; the vessels are injected.

In giving this account of Cit. Lobstiere's work, we have rigidly abstained from every remark or criticism on the several facts and opinions which he advances; many of which have been already the subject of much disputation, and which we think yet open for discussion. To investigate the opinions of any author who

writes

writes on a subject of this nature, he should be read. It is impossible to give in any extract of this kind, all the grounds on which he advances his opinions; and it is unfair to seize on the weak point of a work, or the hazarded opinion of an author, to discredit a great deal of useful matter. For these reasons we have confined ourselves to an analysis of the work of Cit. Lobstiere, or rather we have offered the table of contents of his book, in order that those whom the subject interests should know how far the author merits their further consideration. This mode of reporting continental productions will be strictly observed in all future communications of this nature.

Observations on STRANGULATED SCROTAL HERNIA, *by Cit.* FARDEAU, *formerly Surgeon to the Army; read at the Medical Society of Paris,* 23 *Frimaire,* (14 *Dec.*) 11*th Year.*

THIS Hernia was so large that it descended half way down the thigh. After vain efforts to reduce it by the *taxis*, Cit. Fardeau had immediate recourse to the operation, which he performed in the following manner. After dividing the integuments and layers of cellular membrane which presented themselves to his bistoury, he perceived a kind of vascular ribbon, which he feared to divide, from an apprehension of hæmorrhage; this band was an inch broad, and came from the posterior and external part of the tumour, and which surrounded it in a spiral direction, running from without inwards until it descended to the bottom of the sac. The operator conjectured rightly, that this might be the spermatic cord, and of which he was assured on pressing with his fingers, when he perceived the resistance of the vas deferens. The pain of which the patient complained, and which was similar to that produced by pressing the cord of the other side, left him no room to doubt the fact. Continuing his operation with the precaution which this circumstance made necessary, he divided *a first sac*, (as he expresses it) at the inferior extremity, and from which issued half a glass of water; this facilitated the return of the tumour as soon as he had dilated the ring by means of a bistoury and director. The second sac was opened to the ring, and from

from which issued more water; the contents were then returned into the abdomen, and the testicle and cord resumed their former position. Cit. Fardeau does not give the result of his operations, we cannot therefore say whether the patient has survived. Cit. F. computes that the spermatic cord was at least six times its natural length. He observes, and with truth, that if he had been content with dissecting carefully the cellular membrane at the superior part, in order that he might extend his incision upwards with less precaution, as some recommend, he should have separated the testicle, and performed two operations instead of one. This case offers two facts excessively interesting, namely, the length and disposition of the cord. We know that generally, in the case of scrotal hernia, the spermatic cord is placed posteriorly; instances of a different disposition may be found in Le Dran, (Traité des Operations), Sabatier (Medicine Operatoire); but we believe this to be the single instance where the cord observed a spiral direction. In the hands of a less experienced surgeon, the spermatic cord might have been taken for some other appearance. We find in the 35th Number of the Medical Journal of Paris, the history of an entero-epiplocele, where it was necessary to cut through several bands which the peritonæum formed, and which pressed on the intestine; three days after the testicle was found mortified; in this case there is a strong probability that the cord was divided. Cit. Fardeau tells us, he freed amply *(largement)* the intestine at the ring; he does not say how he did it, though his expressions would suggest the idea that he deviated from the usual mode. We think it necessary to remark, that the expression, *a first sac*, which the author uses, is not correct, in as far as we should apply the term sac solely to the peritonæum including the protruded part. It is not an unfrequent occurrence to meet with small collections of water in cysts formed by the cellular membrane, and which we presume to have been the appearance which Cit. Fardeau describes; and this is more frequently the case in large hernias of long standing; De Haen (ratio medendi) tells us of a case when more than twenty layers of cellular membrane were divided before the operator came to the proper sac; the interposition of water, so as to form the appearance described, cannot be considered wonderful.

Account of a peculiar Kind of LEECH, *swallowed and stopped in different Parts of the Throat; by* CIT. LARREY.

THE worms, which are the subject of this observation, live in pools of muddy water, in the middle of those deserts which separate Egypt from Syria, and of those on the confines of Lyba; they have the form of a horse hair, and are some lines only in length; but filled with blood they become the size of an ordinary leech. When the French army entered this country, the soldiers, pressed by thirst, threw themselves on their mouth and nose, and drank greedily of this water; many of them felt immediately, stings or prickling pains in the posterior fauces, followed by frequent cough, glairy spots lightly tinged with blood, and a disposition to vomit; a difficulty of swallowing, laborious respiration, and sharp pains in the chest: The patient lost his appetite and rest, became then uneasy and agitated, and if the complaint was not relieved he fell a victim. The first person attacked thus, besides those symptoms, had lost much blood. On coming into the hospital, C. LARREY, on pressing down the tongue with a spoon, perceived the leech, which was of the size of the small finger. He introduced a small forceps to lay hold of it; but on the first touch it contracted, and placed itself behind the velum pendulum palati.

As soon as it had resumed its former position he seized it with a polypous forceps; the consequent hæmorrhage soon ceased, and the soldier was perfectly well in a few days. About twenty soldiers were attacked in the same way on the march of the army from Syria to Belbeis. Gargles of vinegar and salt water were sufficient to detach these animals, who placed themselves constantly on the posterior fauces: Fumigations of tobacco, and the polypous forceps were necessary in some cases. The chief of brigade, Lateur Mauberg, commander of the twenty-second regiment of Chasseurs, swallowed two in the deserts of St. Makaire, a day's journey from the pyramids. They reduced him to the last state of emaciation and weakness; and even after detaching these animals, the convalescence was long and difficult. Cit. Larrey gives many other cases of the same kind, in the Memoir from which this Extract is taken; he recommends travellers through these deserts, who should be obliged to drink this water, and in which the presence of these animals is to be apprehended, to strain it through a thick and close cloth, and to add some drops of any acid.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

INDEPENDENT of that which every individual owes to Society, I have no motive for requesting you to give this a place in your useful Journal, than a strong desire of offering my thanks publicly to one, without whose friendly aid the hand which writes this would long since have been in the dust. How far Dr. Beddoes is entitled to this praise of mine, will be best seen by the following relation, which, however inaccurate it may be found in point of composition, is truly correct as to fact. It will likewise prove what merit a certain medical gentleman is entitled to, who has lately taken to himself the credit of introducing the use of calomel in the cure of Phthisis.

For three or four years previous to the autumn of 1800, (the period at which my complaint assumed a threatening appearance) I had been at intervals troubled with a cough, particularly during the winter; however, as it generally disappeared during the summer months, it excited no alarm. At this time, from being troublesome only in the morning, it became likewise so in the evening; and the expectoration, which had hitherto been quite tasteless, became extremely saltish. Though belonging to the medical profession myself, being surgeon of a ship of war, I thought it prudent to take other advice; I accordingly consulted several of the most eminent physicians both in England and Ireland, at different times, and gave to the plans of each more than a fair trial, without deriving the least benefit. And here I must, to the disgrace of medicine, say, that in no one instance was ever the common saying, that "Doctors differ," more completely verified. I was assured by one, that my cough was nervous; by another, that the lungs were in no wise implicated, but that the whole train of symptoms arose from dyspepsia. By one I was advised to try the cold bath, and take antimonials at the same time; another assured me that steel would soon restore me to health; a third, more confident than any of the rest, declared that frequent vomits of ipecacuanha would do the business completely; in this he was perfectly right, for my complaints increased daily.

It may here fairly be asked, how a man in his right senses, putting professional knowledge out of the question, could

could have adopted such wild and contradictory systems? To this I could have given a much better answer when ill, because my feelings were different. I was content to give up all pretensions to common sense, in hopes of receiving health in return. I had now a fixed pain in the superior part of the sternum, with a constant tickling sensation in the chest; I had no fever, and my appetite remained unimpaired, notwithstanding my flesh wasted by almost imperceptible degrees. In this way I dragged on a miserable existence till the beginning of February, when I was attacked in a most violent manner; the cough became constant, the pain of my chest increased, with pain of the left side; violent fever commenced daily at noon, increasing till towards the morning, when it gave way to profuse colliquative sweats; my pulse, which had hitherto seldom beat more than 60 strokes in a minute, now became full, and increased to 80; the urine also became high coloured and turbid. I again had recourse to the advice of several medical people, not one of whom would allow that mine was a consumptive case; although I had from the beginning conceived it to be an incipient tubercular affection of the lungs, and consequently wished to try the fox-glove, but in this my opinion was completely over-ruled.

In the beginning of April, in a state truly deplorable, all my symptoms increased, and worn to a skeleton, it was my good fortune to turn my thoughts towards Dr. Beddoes; being at Plymouth, and unable to undertake a journey to Bristol, I acquainted him by letter of my situation, and received from him the following answer.

"Dear Sir,

"I have received your very correct statement, and cannot see on what principle you have been refused the use of digitalis. To enter into the pro's and con's would far exceed the limits of a letter; I hope however you will give me sufficient confidence, to make a cautious trial of it. Suppose you begin with five drops of the tincture thrice a day, increasing the dose, so as to guard against its depressing effects; if in the course of ten days you derive no benefit from this plan, I would advise the following: ℞. Tinct. colomb. ʒiij. cin. comp. ʒij. opii ʒiss. M. To a tea spoon full of this compound tincture, which is to be taken thrice a day, add a single drop of digitalis, and three of squill, increasing the dose of digitalis, so as not to exceed half the quantity you found unavailing. I shall be glad to

to hear from you in the course of a fortnight, and believe me to be, with best wishes for your recovery,

Your's,

T. B."

It will be unnecessary to say that I scrupulously complied with his directions; at the end of ten days, having taken the digit. to the amount of 25 drops thrice a day, I found no other alteration than that the urine lost its sediment. I then commenced the second plan, and found at the end of five days, that the reduced doses of from 1 to 12 drops of the digitalis, had reduced the pulse to 45 strokes in a minute; my night sweats were considerably lessened; the pain of the chest and side greatly abated; I had still the fever as violent as ever, and my cough was unaltered. Dr. B's. second letter, in answer to mine, stating my partial amendment, is as follows:

"Dear Sir,

"Your letter has given me a mixture of pain and pleasure; but I have little doubt, by calling in all our present resources, you will perfectly recover. Now what I would fain have you try, is a grain and a half, or two grains, of calomel a day, in addition to the digitalis and compound tincture; also a caustic, bigger than a shilling, nearest the place where you suspect most or any disorganization; do not, I conjure you, neglect this. If the skin be hot and dry in the night, rise out of bed, leaving the feet under the clothes; I would almost insure you health on those terms. I am sorry to recommend a complicated plan, but the thing is to restore health, and a little superfluity of medication cannot always be avoided. Write to me when the caustic is in train, for then I shall certainly hear of the reduction of both fever and cough."

The event fully justified his assertions; for in ten days after the application of the caustic, and use of the calomel, the fever was entirely gone, and scarce any cough remained. My amendment henceforwards was so rapid, that, by the beginning of June, I enjoyed as good health as at any period of my life. Conceiving myself perfectly recovered, I incautiously suffered the sore from the caustic to heal, the bad effects of which I soon felt; for, in the latter end of July, being then in the Orion, off Rochefort, I had a considerable return of the cough, with pain of my chest.

chest. I lost no time in applying a caustic a second time, and adopting the other parts of the plan which had before proved so beneficial, and had the satisfaction to find it soon remove every complaint. I was now determined to act more cautiously, and, by the advice of Dr. B. inserted an issue in the wound made by the caustic, and took, during the winter and spring following, every night, a pill composed of digitalis in powder, opium, and ipecacuanha; the medicine I then omitted, resolving to keep open the issue, which I did until last June, when it became so irritable as to induce me to remove it. Eight months have since gone by without any return of my former illness, less subject than ever to catch cold, without paying the least attention to the circumstances of dress or the weather. The only unpleasant feel I ever experience is during wet and tempestuous weather, when an extraordinary secretion of mucus takes place from the lungs, but which immediately disappears on the return of dry weather.

I should have long since laid this case before the public, had I not preferred waiting the test of time, rather than submitting what might perhaps be considered a doubtful cure. I had another reason besides; whilst I had any thing to expect from the skill of Dr. Beddoes, any thing which I might have said of him might wear the appearance of flattery.

Having nothing now, I trust, to hope from him, what I have now said can only be considered as the effusions of a heart grateful for the recovery of the greatest of all blessings. I cannot, with justice to my feelings, conclude this letter without adding a tribute to his disinterestedness and humanity, as well as his skill; totally unknown to him, and without the prospect of receiving the smallest remuneration for his trouble, his attention exceeded even the anxious wishes of a sick man; those two which I have inserted are not the only letters he has written me on the subject of my health; many, very many, has he been at the trouble of writing, which to publish would only serve more strongly to prove the goodness of his heart, and to spin out a letter I fear much too long already.

In the hope that the above may be found sufficiently interesting to gain an early admission into your Work,

Colleton, near Kingsbridge, Devon. I am, &c.

Jan. 18, 1803.

R. ALLEN.

An

On the Use *of* Soda; *communicated by* Mr. R. Simmons, *of Oxendon Street, Leicester Square.*

THE subject of the remedy alluded to, Mary Frazer, a florid, healthy-looking young woman, aged 19, was admitted into St. Martin's Parish Infirmary in April last, for the cure of a swelling in the right groin. At the time of her admission, it was hard and painful, and it went on to a state of suppuration and broke of itself. The sore in the groin, instead of healing kindly, which might naturally have been expected from her general appearance of health, soon put on an ill-conditioned aspect, and became extremely irritable, spreading wide and ulcerating very deep, giving that appearance usually denominated phagedenic. From her situation in life, the case was considered as venereal, though there did not exist any other venereal symptom, and she was put on a course of mercurial friction; but getting worse under it, the most usual remedies in such cases were had recourse to, and each persevered in as long as any kind of benefit was to be expected from their use; viz. bark, opium, cicuta, sarsaparilla, the nitrous acid, with carrot and hemlock poultices, poppy fomentations, sea water, and other remedies esteemed useful in phagadænia; but she continued getting worse, until her health became much impaired, and her appetite was nearly gone.

Not knowing, at this time, any particular remedy that could be depended on, so as to produce a cure, I determined on trying the effects of soda, and thought that the common crystals would answer for that purpose; which I used both externally and internally, and its good effects were soon very striking. The sore, which had hitherto preserved an ugly, gleeting, ill-conditioned appearance, put on a healthy granulating surface; her appetite mended and her general health speedily improved; and by continuing the use of this remedy, she is now nearly well, the sore being too trifling to mention. The mode adopted for making use of this remedy, was to dissolve an ounce of the crystals of soda in a quart of water, and to apply it externally in the form of a poultice with crumbs of bread; at the same time, taking three table-spoons full of this solution three times a day.

February 8, 1803.

An

An Account *of* Calculi *of considerable Size and Weight, extracted from the* Fossa Navicularis; *by* Cit. Dumeril.

THE young man from whose urethra these calculi were extracted, was twenty-one years of age. The first nucleus appeared in the fossa navicularis, the original cause of which was a contraction of the prepuce, a kind of natural phymosis, which at the period of the operation hardly admitted the head of a pin, with which the patient removed the calculi which obstructed the flow of urine, and produced considerable pain. It was about this original nucleus that the rest were formed, and which by their size had entirely disfigured the glans, so as to give it the appearance of a second bladder; three principal calculi articulated together nearly inch 0,60 in length, and 0,40 in diameter, formed the parietes of this kind of quarry, in the cavity of which floated the others, polished and cut into surfaces of different size and form. To extract these calculi it was only necessary to open the gland which was then a membrane. Cit. Dumeril, from a variety of obvious considerations, extracted these calculi through an incision on the back of the penis; the inner surface of the sac resembled a mulberry, in the anfractuosities of which a variety of small stones were lodged. The sac contracted, and in a few days the gland put on its natural appearance. The stones are deposited in the collection of the School of Medicine.

Observations on the Treatment of several Diseases, as practised in the General Hospital at Bamberg; by Dr. Marcus. *Communicated by* Dr. Noehden.

DR. MARCUS, first physician to the celebrated hospital of Bamberg, made himself particularly conspicuous amongst the followers and well-wishers of the new system of medicine introduced by the principles of Dr. J. Brown. He endeavoured to show their consistency with practice and experience, by putting them to a trial at the bed of the sick patient; he has communicated the results of his observations in a periodical publication, which was intended, according to its title, to examine those principles of incitement by experiments made on the patient; and having

ing been, by these means, convinced of the general consistency and practical utility of the new system, he thought proper to consider it, on the whole, as well founded, and consequently the farther continuation of this publication was no longer requisite. The present publication, however, may be taken for it, though appearing under a different title, and it contains the cases of diseases, as they occurred and were treated in the hospital at Bamberg.

In the first number, Dr. M. has premised some miscellaneous remarks, relating to the general treatment, as adopted in that hospital, which we consider, for more than one reason, as highly interesting to the practitioner.

"The only remedies which have for several years been employed in synochus as well as typhus, are opium, naphta, camphor, and musk; serpentaria and arnica are seldom used, and bark (cortex Peruvianus) is almost entirely exploded in the treatment of these diseases. The principal and most efficacious remedy however proves to be, according to our experience, opium in form of the most concentrated tincture. One of its chief effects in febrile diseases seems to originate in the property of producing costiveness more than any other known remedy. It is almost daily observed in our patients, that those who are for the longest time constipated, recover more readily than others. It is not uncommon with us to see patients afflicted with a typhus to remain costive for two, three, or four weeks; and even when they are in a state of re-convalescence, no alvine excretion takes place: But as soon as the bowels are once moved, the excretion will proceed as in the sound state, every twenty-four or forty-eight hours, even if the opium is continued. In patients, however, in whom the pressure of constipation seems to occasion several inconveniences, a clyster of an infusion of chamomile flowers and arnica is applied; but such cases are rarely observed. In putrid and nervous fevers, in which the head is particularly affected, and sopor and dizziness observable, symptoms which are generally considered to contraindicate the use of opium, it nevertheless proved of the greatest service, particularly in combination with warm aromatic fomentations. Besides opium, camphor was frequently employed in a dose of from two to five grains, in cases of synochus and typhus; sometimes it was alternately given with opium; and in case the patient disliked it, naphta was administered with equal success: but if the patient had any inclination to diarrhœa, naphta was discontinued, as being in this case not properly indicated.

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The prejudicial effect of naphta in such cases, arises from its being impregnated with too much oxygen; and even if it is well prepared, it cannot be prevented, on opening the vessels in which it is contained, from entering into contact with the external air, and thus it becomes charged with oxygen."

Dr. Marcus could not conceive why a continual fever, or synochus, was frequently much sooner cured than a tertian fever, notwithstanding this originates in a far less degree of debility. For this singularity he could not account but by the manner of employing the volatile stimuli in both diseases. In the former they are generally given without intermission, often day and night; whereas in intermittent fevers, where danger is not so near, the treatment goes on more slowly, and the medicines are discontinued during the paroxysm and by night; by such spaces, however, the debility often increases as much as it has perhaps been diminished before by the administration of medicines. Induced by these and similar considerations, Dr. M. determined to treat intermittent fevers in the same manner as the continued ones, and he had the satisfaction to see his expectations crowned with success. All intermittent fevers treated in this manner were cured within a very few days.

In pulmonary consumption, opium likewise proved of the greatest efficacy; bark, lichen islandicus, senega, and digitalis were in all cases found to be either of no use at all, or at least very inefficacious remedies. In almost all cases a mixture of three drachms of myrrh, one drachm and a half of balsamus Peruvianus or canadensis, and half a drachm of extract. opii was of excellent service, it being made into pills of one grain each, and given alternately with tincture of opium, in a dose of two or three pills every hour. By this remedy the troublesome cough and expectoration were considerably diminished, proper rest procured, and the debilitating sweats and diarrhœas removed; it was likewise beneficial for the organs of digestion. By properly employing this remedy and adapting it to the degree of the disease, of the direct asthenia, and of the state of digestion, Dr. M. succeeded in curing patients, in whom every symptom of declared pulmonary consumption was observable.

In dropsies, little use has been experienced by those called diuretic medicines, which are, on the contrary, extremely hurtful, if not belonging to the class of incitants. But by properly attending to the degree of direct asthenia, in

in which this disease originates; by adapting the plan of treatment to it, several very obstinate cases of dropsy have been radically cured, and in a proportionably short space of time. The remedies that were made use of, were either opium by itself, or in combination with liquid anodynes, essent. cort. aurant. or tinctura martis tonica.

"The most efficacious prescription in venereal complaints was a mixture of 3 ounces of aq. cinam. c. vino, four grains of corrosive sublimate, and two scruples of tinct. opii, of which from forty to eighty drops were to be given two or three times a day. Salivation has never been observed to follow the administration of this remedy, which even agreed with a weak constitution and digestion.

"In scabies we merely apply an unguent, consisting of three ounces of fat and one drachm of spir. nit. fumans; sometimes we also make use of the powder of charcoals. These remedies are quite sufficient, except in cases combined with a general disease, in which opium and warm baths are used. The external as well as internal use of sulphur is exploded from our practice in this disease. A series of experiments and observations has convinced us, that, besides mercury, there exists no specific remedy. The greatest and most useful specific is to explore the degree of the disease, and to adapt to it the choice and dose of the remedy.

"Ulcers are treated with us in a very simple manner; they are generally dressed dry; ointment and plasters are never made use of. In foul ulcers the dust of charcoal proved sometimes serviceable. For frictions, which however are but rarely applied, we formerly used to take opium; but being convinced of its inefficacy, when applied externally, it has been since disused, and instead of ointments, a mixture of one ounce of spirit. vin. rectificat. and one drachm of balsam. peruv. answered all our purposes in frictions.

"Amongst the persons wounded of the Gallo-Batavian army, the chief hospital of which was at Bamberg, in November, 1800, many were afflicted with tetanus; but Dr. Stutz's method of cure, employed with much care and accuracy, never answered our expectations. Opium in sufficient and increasing doses, immediately given, is the only and surest way of cure. Warm baths, prepared after Dr. Stutz's prescription, appear to be not so serviceable as those made of a decoction of aromatic herbs, mixed with a sufficient quantity of spirit of wine."

MONTHLY

MONTHLY REPORTS.

Cases admitted under the Care of the Surgeon of the Finsbury Dispensary, St. John's Square, Clerkenwell, from January 10, to February 10, 1803.

Phlegmone Artuum	2	Contusiones	9
——— Testis	1	Spasma Maleoli	5
——— Maxilla	1	Concussio Cerebri	1
Erysipelas	1	Combustura	3
Mastodynia	1	Vulnera	2
Abscessus Artuum	3	Lues	5
——— Psoas	1	Gonorrhæa	3
——— Lateris	1	Hydarthus Genu	3
——— Cervicis	1	Hæmorrhois	1
——— Ani	2	Stricturæ Urethra	3
Empyema	1	Tinea	1
Mortificatio	1	Prolapsus Uteri	1
Ulcera Artuum	9	Spina Incurvata	1
Pernio	1	Hydrocephalus	1
Leucoma	2		
Fractura Costæ	1	Total	68

It is a general remark among Surgeons, the truth of which is frequently evinced by observation, that in no injury or disease is there so much doubt, with respect to the prognosis, as in injuries of the head; it not very unfrequently happening, that injuries which in the first instance were apparently of little moment, and unattended by any symptoms creative of alarm, terminate fatally; while, on the contrary, a variety of cases might be brought forward, which, in the first infliction of the injury, from either the attendant symptoms or the local appearances, were productive of considerable fears, and yet eventually had a happy termination.

The above case (in the list) of concussion was in the first instance attended with all those symptoms which are usually considered as prognostic of imminent danger; but to plentiful bleeding, and other evacuations, these symptoms in a very short time yielded, and no ill effects from the injury were experienced.

That the structure of the brain may be very considerably injured, either from a wound or from compression by a fractured portion of bone, there are various instances to prove, without producing even a single symptom of deranged state of that organ. A few months since, a case occured to me in private practice, of a boy, who in consequence

sequence of a kick of a horse, suffered a fracture of the cranium. On the first reception of the injury he became comatose, and had other symptoms of compression or concussion. A surgeon in the neighbourhood being called, bled him freely, and administered a cathartic medicine, and dressed the wound of his head. He in the course of an hour became sensible, and was then free from *symptoms*. After a few days he was brought home, when I first saw him, being requested to attend him on account of the wound of the scalp, as no suspicion had been entertained of any further injury. On examination I found the wound was in the forehead, and that there was a considerable fracture of the bone, which was wedged inward, having penetrated the membranes, as was evident from the discharge of a large portion of brain by the wound; yet although the injury to the cranium, to the brain and its membranes, was so great, yet no symptom existed of any affection of those organs: in consideration whereof, I did not perform the operation of the trephine; nor was it required, as the subsequent event proved; as he recovered perfectly without a single disagreeable symptom, or any unpleasant occurrence, except from the delay which was occasioned to the cicatrization of the scalp from the exfoliation of two or three small splinters of bone.

This case certainly leads to the practical question of, What are the cases that require the use of the trephine? On this point some of the first surgeons of the present day have differed: some advise the operation in every case of fracture of the bone with depression, whether attended with symptoms of injured brain or otherwise; while others never operate, except the presence of symptoms indicate the necessity.

What is our intention in performing this operation? Certainly, to remove pressure from the brain or its membranes, on which certain symptoms depend; or, if such symptoms have not arisen, to prevent them by an elevation of the offending cause. It therefore appears to me proper, that in the first instance of an accident of this kind, where the bone is much depressed, that pressure should be removed, without waiting for the accession of symptoms; for although, at first, symptoms of compression may not occur from the primary mechanical action of the bones, yet when inflammation arises, this action, if suffered to continue, may not only aggravate the inflammation, but may, in the then increased state of tension, prove a cause extremely productive of actual compression. Had I been therefore called, in the first instance, to this patient,

patient, I should have certainly judged the operation advisable; but at the period when I first saw him, he had passed above a week without any symptoms of inflammation; there was a plentiful discharge of the brain likewise, which I concluded, in some measure, tended to prevent compression by means of the bone; I therefore thought, that in this state of things there was more fear of inflammation from an operation, from a more free exposure of the brain, and probably on disengaging the bone a still further laceration of the membranes, than by suffering the parts to remain at rest, and preventing internal compression by free evacuations and a strict antiphlogistic regimen.

The certainty to which the safety, mildness, and prophylactic effects of the Jennerian Inoculation is now reduced, has induced the Governors of this Institution to publish a solicitation to the Poor, to submit their families to this operation, and an order that all who choose, shall be inoculated, and properly attended to, without any letters of Recommendation. That the Order should be made still more public, I have annexed a Copy.

No. 68, Hatton Street. J. RICARDS.

FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

THE power of the Cow-Pox as a preventive of the Small-pox seeming now fully established, the following well-authenticated facts are presented to the public, to encourage persons to embrace this favourable opportunity of avoiding the baneful effects of the Small-pox in their families, one of the most dreadful maladies that afflict the human race.

1. The Cow-pox, properly conducted, has not failed, in a single instance, of proving a certain preventive of the Small-pox.

2. The Cow-pox is a disease unattended by fever, and perfectly free from danger.

3. The Cow-pox is seldom attended with eruptions, and therefore cannot disfigure the skin.

4. As the Cow-pox is not infectious, it cannot be communicated in any other way than by inoculation: the mother, therefore, is not liable to disease from suckling her child.

5. The Cow-pox is never productive of other diseases, or any blemish whatsoever.

6. The Inoculation for the Cow-pox may be performed at any age, or under any state of the constitution; even in children during the time of teething.

Signed, JOHN REID, M. D.
THO. JAMESON, M. D. } Physicians to the Dispensary.
JAST. RICARDS, Surgeon to the Dispensary.
MICH. BARTLETT, Apothecary.

A parti-

A particular mark remaining upon the arm being necessary to render it effectual; patients are defired not to discontinue their attendance upon the Surgeon until he has given them a discharge.

The Governors of the Dispensary have therefore resolved, That all persons applying may be inoculated with the TRUE Vaccine Matter, and properly attended, free of expence, and without a letter of recommendation. Application must be made to Mr. Ricards, the surgeon, at the Dispensary, on Monday in every week, at twelve o'clock.

By Order. A. RHODES, Secretary.

February 16, 1803.

Account of Diseases in an Eastern District of London, from January 20, to February 20, 1803.

ACUTE DISEASES.

Pneumonia	12
Typhus	4
Rheumatismus Acutus	7
Dysenteria	3

CHRONIC DISEASES.

Dyspnœa	17
Tussis cum Dyspnœa	24
Catarrhus	8
Raucedo	5
Hæmoptoe	3
Phthisis Pulmonalis	2
Ascites	4
Hydrops Pectoris	3
Epistaxis	2
Hæmorrhagia Intestinalis	2
Enterodynia	5
Menorrhagia Difficilis	2
Amenorrhœa	5
Vertigo	4
Paralysis	1
Hypochondriasis	2
Rheumatismus Chronicus	20

PUERPERAL DISEASES.

Peritonitis	3
Menorrhagia Lochialis	3
Abscessus Mammæ	2
Ephemera	4

INFANTILE DISEASES.

Ophthalmia	4
Ophthalmia Purulenta	3
Febris Mesenterica	2
Aphthæ	3

The List of Diseases, occurring in the present month, bears a considerable resemblance to that of the last. Complaints of the chest, as is usual at this season of the year, form a considerable part of it. Peripneumonies and catarrhal affections have been very general; in most instances they have been tedious, and in some fatal. In cases of the more acute kind, venæsection was highly necessary, and in some instances a repetition of it was attended with advantage. This was particularly indicated by the patients being troubled with a constant cough, a considerable degree of pain in the chest, and a deficiency of expectoration. A diminution of the pain and difficulty of

of breathing, with an abatement of the cough, and an alleviation of all the febrile symptoms, in general succeeded the use of the lancet. Expectoration also became more free, and the discharge of a quantity of viscid mucus was accompanied by a more easy respiration. In those instances, where the perpetual irritation of coughing prevented the patient's sleeping, if the expectoration were tolerably free, and if venæsection and blistering had been premised, an anodyne was given at night with apparent advantage.

The opium, combined with antimony, or given in the form of pulv. ipec. comp. generally succeeded best; or, in the latter stage of the disease, the addition of a few drops of tinct. scill seemed to prevent that check of expectoration which is sometimes feared as a consequence of the unguarded use of opium.

CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Mr. John Bell's Principles of Surgery.

[Concluded from p. 182 of our last.]

"Ask a young man who has studied his profession faithfully," says our author, "what he would do with a fractured limb? he cannot tell. Ask the same question of one who has practised his profession long, who has moreover practised it well and sensibly. He can hardly tell how he himself is accustomed to manage a fractured limb; he has no rule nor settled method. . . . . . Ask the man of book and study, what have been the doctrines of the old, or the actual improvements of the modern surgeons—he also is at a loss." . . . &c. &c. Can the author really mean to assert that we have no rules nor regular method of practice in the treatment of fractured limbs, that we are unacquainted with the nature of callus, with the gradual process of ossification by which nature procures the reunion of a broken bone? and do we still suppose, with the older surgeons, that callus is "an inorganic concrete poured out from the extremities of the ruptured vessels, which sets

or

or hardens like stucco and Paris plaster into the consistence of bone?" This is not the only instance that we have met with in the volume before us of undervaluing or neglecting to relate the actual practice of modern surgery; the author is abundantly liberal in recording the errors of antient practitioners, (and it is but justice to add, his strictures on their operations and opinions abound with strong sense and acute reasoning) but Mr. Bell must know that the respectable names of Sharpe, Gooch, or Aitken, no longer carry with them undisputed authority; and the juster pathology and improved practice which in many instances have been adopted subsequent to these ornaments of their profession, are not now to be announced to us as discoveries or untried improvements.

The author considers the important subject of fracture under the following heads:

1. The opinions, prejudices, operations, and daring practices of the older surgeons. These we shall not here enumerate. They consist of theories concerning the nature of callus, and plans of treatment during its formation, abounding with false notions of the pathology of broken bone, and dangerous errors in practice. This was the age for a multiplicity of inventions, many of them (mechanically considered) highly ingenious, for the regulation of the growth of callus, for confining it with tight bandages and straps, buckling it into shape, moulding it by compresses, and binding it over to good behaviour. The author here explains the more accurate idea of the ossifying process and growth of callus which modern physiology has introduced, and we may add, what several of our readers may not be aware of, that he shews very clearly that the accident of breaking the bone a second time during the union of the first fracture, is sooner repaired, and the broken ends reunite in a shorter period than at first.

2. The second head contains the definitions of the various species of fracture, which is clear and sufficiently comprehensive for practical purposes.

3. The third head (which forms a distinct chapter) comprehends a subject of great importance, namely the various accidents of the hip joint, its luxations, fractures, caries, and all the formidable consequences of these complicated injuries; formidable on every account, both from the intricacy of the parts, the resistance which their natural conformation so often opposes to the curative process, and the difficulties which press upon the surgeon in every shape in these unfortunate accidents.

The author begins this chapter with an excellent sketch of the general anatomy of the hip joint; of the parts of which it is composed, their mutual connexions and tendencies to injury; and this is a species of descriptive *topography*, in which we think him at all times peculiarly happy. It is here, as in other parts of the work, illustrated with perspicuous drawings. This introduces the subject of luxation of the femur, a subject which will be read with inte-

rest. From luxation he proceeds to fracture, and treats very fully on the calamitous accident of fracture of the neck of the femur.

Of this accident he lays down two distinct varieties, which are followed by very different consequences. In the one, the injury done to the part is no more than the simple fracture of the neck of the bone; *the capsule* especially *remains entire*, and the limb is but little shortened. In the latter case, owing to the originally superior violence of the injury, or the frantic efforts of the patient after the accident, the broken end of the bone is driven through the lacerated capsule, the muscles are displaced from their beds upon the back of the haunch bone, and the limb is shortened full four inches. The consequences of each injury differ very materially, though in both they are equally calamitous. In the former, the whole articulating process of the bone lies within the capsule, and the broken ends often unite indeed, but only by a loose, and, as Dessault observes, by a kind of *fibrous production;* and in no instance is the adhesion sufficiently firm to allow of the future use of the limb. In the second case, that is, where the broken end of the bone is driven with violence through the capsule, high inflammation takes place, an abundance of callus will be produced, but without that nice adaptation which obtains in fractures of the lower limbs, and the fractured bones will unite in a clumsy bulky mass of callus, which generally renders the limb burdensome and almost as useless as in the former instance. The diagnosis of luxation concludes this chapter, and it is illustrated by drawings of the luxated bones *in situ.*

Fracture of the thigh bone occupies the next chapter; and in this accident it is well known, that the contraction of the muscles and shortening of the limb, oppose the most formidable obstacles to a perfect cure. To counteract the muscular contraction, a profusion of machines have been contrived from the earliest times, many of which would not disgrace the invention of an inquisitor, and the author presents us with drawings and descriptions of a great number of them. The ill success of these complicated machines has obliged the contrivers successively to throw them aside, and to resort to a simpler and gentler practice.

The concluding chapter of the subject and the volume, is one that will be perused with much interest, as it contains a variety of important directions and rules for the management of simple, compound, and gun-shot fractures, deduced from the practice of the best surgeons, and from the doctrines explained in the preceding part of the work. It is more practical than the former part, and comprehends many excellent observations. The directions which the author gives, are full, precise, and yet simple, so that the reader cannot but understand both the purport of the rules which are laid down and the reason for their adoption. We shall not enter into all the particulars of this comprehensive chapter, but shall only observe, that after treating of all the varieties of simple fracture, he proceeds to the compound, to the dreadful laceration

caused

caused by gun shot, and concludes with the question of the propriety of amputation; a question which can never be determined by general rules, but must be considered with all its relations to general state of health, to climate, period of life, and especially to the situation of the patient and the degree of attention and medical care which he may be able to command.

We shall just add, that the author, with very laudable attention to some of the most important stations in which surgical skill is required, takes frequent oppportunities of introducing practical directions for the information of the student who devotes his time to the army or navy service; a service which possesses every claim to the collective contributions from the skill and experience of the whole profession, and a school which has sent forth many of the brightest ornaments of the art of surgery.

Observations on the Constitution of Women, and on some of the Diseases to which they are more especially liable. By SAYER WALKER, M. D. *of the Royal College of Physicians, London, Physician to the London Lying-in Hospital.* London, 1803. pp. 208. 8vo.

THE peculiarities of the female constitution, and the treatment of diseases to which the sex are more immediately liable, are subjects which have been so often and so well written on, that we can hardly expect to find any new observations in a work like the present. Nevertheless, as several points of practice, and those of no small importance, are still under discussion with the medical public, we are glad to receive the results of the observation of so experienced a practitioner as the author of the Treatise before us. The public opportunities for enquiry which he has enjoyed are very extensive (as he observes in the preface) having been in the habit of regular attendance on all the duties of the medical department, in the City of London Lying-in Hospital, for nearly nine years, during which period several thousand women have been admitted, the care of whom and of their children, in every disease under which they have laboured, has devolved upon him. The more immediate object of the present publication appears to be that of correcting some popular and vulgar erroneous opinions which are prevalent among the sex and their female advisers. The most prominent of these is the use of the *heating regimen* during the puerperal state; of cordials and volatiles, with a view to support and strengthen the patient under hæmorrhages that occur at different periods. Every practitioner that has attended to the management of females, in every rank of life, and more especially among the lower class in this metropolis, must be convinced of the extensive prevalence of this regimen, and of the mischief which it often produces. Errors of this kind, supported by the authority of the physician, and fostered by natural inclination, take a deep root, and spread widely and rapidly. To oppose them by the voice of cool and prudent advice, is an arduous but honourable contest; and it is probably on this

account that the author has compressed his observations into a small compass, and rendered the language, and method of treating the subject, in some degree popular, that sensible and well-informed females may themselves contribute to an object in which they are so much interested.

The arrangement followed in the Treatise before us is simple and perspicuous. The subject is introduced with a sketch of the peculiarities of the female constitution, compared with that of the stronger sex, producing the tendency to disorders of increased irritability, and a habit of body and mind susceptible to every impression. The important period of menstruation next engages the author's attention; and, connected with it, the diseases of chlorosis, and suppression of the menses. In describing the latter, the following important remark is introduced; "A very common practice with patients labouring under this complaint, is to fly immediately to the use of the most forcing medicines (as they term them) that may be presented to their notice, in a public advertisement, as specific remedies for the particular disease under which they labour." He adds, "Too great a solicitude on the part of the parents or friends, to procure the appearance of the menses at a certain time of life, has led to the premature use of those very remedies which, under different circumstances, might have been useful."

The danger which the author apprehends (often we fear with too much reason) is an inflammatory state of the body, produced by the injudicious use of such remedies, and hæmorrhages, not the spontaneous and salutary efforts of Nature, but the consequences of the artificially increased activity of circulation.

The general appearance of a chlorotic patient seems to indicate that the constitution is not yet prepared to produce the menstrual discharge; and therefore, he argues, much mischief may be done by rashly attempting to anticipate a process of Nature, which can be only salutary when it is spontaneous. To prepare the constitution for this process, by improving the general health and activity of body, is very different from exciting it by violent medicines, which bring on a comparative precocity of the uterine system, often at the expence of the rest of the constitution. The particular danger which the author views in such a practice is that of consumption, the diagnosis of which, when combined with chlorosis, every practitioner knows to be attended with peculiar difficulty.

The subjects of menorrhagia and fluor albus, compleat the sketch of female diseases in the earlier part of life. In fluor albus, he notices its very early appearance in some children, long before the age of puberty, which often is so considerable as to require some attention.

The second section, contains the history of the diseases of advanced life, that is to say, the various inconveniences, and sometimes serious diseases to which women are liable during the period of the cessation of the menses. Of these, the most important are uterine

uterine hæmorrhage, and schirrus or cancer. The succinct manner in which the author treats of these disorders, precludes any very interesting description or important pathological investigation.

The diseases that occur during pregnancy are next considered, in the same concise but comprehensive manner; they are, nausea, heart-burn, costiveness, derangement of the urinary functions; œdematous enlargement of the lower extremities, cramp, spasm of the stomach and bowels; convulsions, hæmorrhage, and premature labour. Some confusion is occasioned by this extreme brevity, particularly on the subject of parturient convulsions and epileptic paroxysm. It does not appear whether the author considers them as separate affections, to be treated equally by blood-letting, and the antiphlogistic plan. More attention is very properly bestowed on the important subject of uterine hæmorrhage, as being by far the most dangerous accident to which parturient women are liable.

The diseases which occur after parturition naturally follow, and occupy the remainder of the volume. The inflammation of the breast and the milk fever, require the peculiar attention of the practitioner. The local symptoms are thus described. "The patient first complains of a sense of fulness and uneasiness in her breast, attended with a weight and pressure, which naturally leads her to place her hand underneath, with a view to support it. In some cases this is succeeded by uneasiness in the axilla, or by a hard lump in some part of the breast, which is particularly susceptible of pain upon pressure. If the inflammation continue, it will assume a florid colour, which is gradually diffused over the whole of the organ. In a little time, if the disease be not arrested in its progress, some part will appear more prominent than the rest, and a throbbing pain will be felt; in this way it will go on till suppuration takes place, when, as the matter contained increases and the skin becomes thinner, it will be felt by the finger, and in a little time will be discharged from the most dependent part of the tumour." The usual uncertainty with regard to topical applications here appears; in the incipient stage, the author observes, the use of some cooling lotion may be very proper: emollient fomentations and cataplasms may also be applied with advantage; but no precepts for the regulation of these very opposite applications are attempted. Where the child does not suck, he recommends as a means of checking the flow of milk, to place in the axilla a piece of cotton dipped in an embrocation, consisting of aqua ammonia, one part, with sp. vin. camph. three parts.

It might be expected that the subject of puerperal fever should engage the attention of a practitioner, whose opportunities for observing this disease have been considerable; and accordingly, we have a fuller history of it than of most of the other female maladies. The description is clear and accurate, and the appearances on dissection are given in this case, in a few sentences. The mode of practice recommended is the antiphlogistic, to as great an extent as can be pursued with safety.

Puerperal mania follows, and the author is disposed to make a distinction between simple alienation of mind in the puerperal state and active phrenitis. The cause of the latter dreadful disorder is involved in obscurity, and the best method of treatment scarcely indicated. The volume concludes with some remarks on the phlegmatia dolens; a disease which has of late attracted some attention.

The reader who expects to receive in this little volume, from the physician to a large and excellently conducted charity, any new observations or interesting discussion, concerning some of the more important or less common of the female diseases, will find himself entirely disappointed; but as a neat, brief sketch of a very extensive subject, and a summary view of the actual practice of the present day, cautiously, and we might almost say, *anxiously* divested of theoretical discussion on controverted points, it will be well received by those who want leisure or ability to pursue the subject more at large, and for any purpose of extensive utility.

Extract from an Account of Cases of Typhus Fever, in which the Affusion of Cold Water has been applied in the London House of Recovery. By W. P. Dimsdale, *Physician to the Institution.* London, printed for the Society for bettering the Condition of the Poor.

The valuable practice of cold affusion, lately revived by Dr. Currie, and considered in so truly a philosophical manner in his excellent work on Fever, must often have come under the notice of all our readers; but its progress is still slow in this metropolis, and in many other parts of the kingdom. It is therefore, with great satisfaction that we observe the experiment (if indeed it can still be called *experiment)* pursued in the London House of Recovery, with so much vigour and such perfect success. Dr. Dimsdale, in these few pages, clearly and briefly relates twelve cases of perfect typhus fever cured by this simple remedy; and the perspicuous simplicity of the narration gives the strongest internal evidence of its fidelity. *(See the work itself, p. 206 of this Number.)*

Dr. Trotter's Medicina Nautica,

[*Continued from p.* 185—187 *of our last Number.*]

Dr. T. presents us with a Sketch of the contents of this third volume in his Introduction. "The present volume," says he, "I trust, will be found to be not inferior to either of the former. The dismissal of the hospital ship cut off much of my communication with the fleet; and in some parts I appear rather the historian of the afflictions of the sick, than their Physician. Lord Bridport ordered all the stores of that ship, which had been the pride of our service to complete, to be landed, without ever consulting me, whether any thing ought to be reserved, lest the fleet came to action, or for other eventual malady. The consequence has

has been, that the number of deaths at sea has been very great beyond the preceding seasons, and the sick deprived of all the comforts which the Admiralty, under Earl Spencer, had so bountifully granted. Fresh meat and vegetables, it is true, were liberally supplied in 1801, off Ushant; but these are only a few out of many delicacies with which our hospital was stowed. My sentiments on these subjects are not fashioned to the opinions of any set of men; but, what I conceive to be better, they are the language of British benevolence, and the practice of a physician who, amidst all his foibles, has not been known to discover the spirit of temporizing. Studies similar to these procured me the appointment which I have the honour to hold; they have supported me through much bodily fatigue and mental exertion; and they shall attend me through this last of my labours, in the naval service of my country. Many improvements of acknowledged utility have originated with me, and many have been suggested that others will have to accomplish. In this, as in my former volumes, many official representations are introduced for the information of our successors. In the event of a long peace, they might otherwise be lost to the public. The navy at this moment abounds with young men of the medical profession, who are earnestly attached to its studies, and ardent after improvement. These gentlemen, at some future day, will occupy the posts of honour in the department; but the same prejudices that have operated against me as a beginner of correction, are not likely to be opposed to them in the same degree. And in this manner will be attained, in fifty years, that perfection of medical duty and arrangements, which, I think, might be brought about in as many days. Had I possessed the power, as I do the inclination, this task should not have been left to others.

"Medical readers will be astonished to see, at this period of a triumphant navy, so many abuses left to prey upon health, and that so little desire after improvement should be discovered. But it is with the health of the public as it is with the individual, the value of it is not thought of till it is lost. I have therefore inserted the copy of a *Letter* to the present First Lord of the Admiralty, "*on meliorating the encouragement to medical officers.* It exhibits in a concise view a radical method of reform; and, I hope, will be found equally consistent with the benefit of service and that of the surgeon. It is at least proper that long experience on this subject, as well as others, should be recorded, till a disposition shall be manifested to reduce it to practice.

"Such *occurrences* relating to health as are any how interesting, are detailed, as in the former volumes. Some things, it may be remarked, might have been better omitted: '*but my pen guides me, I guide not it.*'

"The subjects of *Contagion and Typhus* are comprized under one article; which enables me to offer frequent practical remarks, as suggested by matter communicated by the surgeons. These will be found

found rather to enliven the narrative than to interrupt it. This head affords many shocking examples of the horrors of the impress service; would that I possessed eloquence sufficient to convince statesmen of its iniquity; for the facts are palpable! If it is wanted to subdue effectually that spirit of insubordination and revolt, which has so repeatedly appeared this war, it must be by finding *another method* for manning the navy. Make the service of your seamen voluntary, and tumult will be at an end.

"Some *Thoughts on preventing the Plague* follow next. They were written three years ago, when that disease was much the subject of conversation in this country.

"A distinct article is now allotted to the *ventilation of ships*. This, I hope, will be useful to officers; for it is of the first importance in preserving the health of a ship's company. It might have been extended to a much greater length, in explaining theory; but for practical utility it will be deemed sufficient, as it fully unfolds the causes that generate foul airs.

"The *Small Pox* continues to excite our vigilance; and the *Cow Pox*, that first blessing from the hands of medicine, is now received among sea diseases, on a prophylactic plan. I have only to regret that I could not accomplish my purpose on this business.—*Catarrh*, *Pneumonia*, and *Ophthalmia*, are connected in one article.

"The subject of *Phthisis* is a new discussion in *Medicina Nautica*. If the treatment of the disease receive no advantages from our animadversions, the history of it is enlarged. The causes which have rendered it frequent in the Channel, especially in 1800, are not calculated to raise pleasurable feelings. But what human being can brave variety of affliction equal to a British seaman!

"Under the term of *Spasmodic Affections*, I have introduced various complaints of the dyspeptic, hypochondriacal, and nervous kind. These diseases are by no means uncommon in a man of war at all times, but they have been very frequent of late. It is the more necessary to guard the inexperienced surgeon, as they are often mistaken for complaints that require a different mode of treatment.

"We continue to accumulate such facts on the history of *Scurvy*, as may still improve the method of prevention and cure. In this, as in some other subjects, we have looked beyond the mere means of cure; our views are directed to preserve the strength and vigour of muscular action, for the purpose of enterprize.

"Some valuable selections are made from the communications of our numerous correspondents, as incidental to our plan. Parts of these are from the Mediterranean, which station has been the scene of considerable activity during the operations in Egypt and Malta.

"For the first time, we offer the plan of a *Sick Berth*, which is to be considered as the hospital of a ship of the line. I have also given a method of providing a *Diet for the Sick*, that is much superior

superior to any thing of the kind that has ever appeared in the navy. A mixture of regret accompanies this part of my work, that I have not been able to make this improvement general throughout the fleet and service at large. But it is necessary to save it from the wrecks of time.—*Sea Sickness* has also, for the first time, met with our notice.

"The history of the *Malignant Ulcer*, by the additions of the present Volume, is rendered very full. I wish I could say that they have pointed out any successful method of cure.

"The contents of this Volume, in different parts, are so much a sequel to what I have written before, that it is necessary to remind the readers of it, lest they should form opinions partially. For instance, in the article Contagion, where I have exposed the bad effects resulting from the impress service, it will be seen in the first Volume, that I had suggested means of guarding against all this calamity as a source of disease. In every disquisition it will be easily perceived, that the author has had one object in view, to which all others have been secondary.

"From the Interest which I have taken in the cause of medical officers from my first becoming an author, the subject naturally recurs to me, in bringing this last of my labours to a conclusion. I must therefore invoke the different tribunals of science and literature, as they may honour this Volume with a perusal, that they would well consider the arguments which I have produced in favour of increased encouragement to these gentlemen. Physicians to fleets are equally subject to a narrow establishment with surgeons; and one of the most painful consequences of a small income, must be the inability to keep pace with the progress of medical science in the purchase of new books. With this last wish in behalf of a body of men to whom the public owes much, I now conclude; and thus, my beloved Navy! farewell!"

A New Medical Dictionary containing a concise Explanation of all the Terms used in Medicine, Surgery, Pharmacy, Botany, Natural History, and Chemistry. Compiled by Joseph Fox, M.D. *late Physician to the London Hospital. Revised and augmented by* Thomas Bradley, M.D. *Physician to the Westminster Hospital, &c.* 12mo. London, 1803.

The peculiar merit of this very small and portable dictionary, consists in the enumeration of *all the terms*, employed in the several sciences connected with Medicine and Surgery. The explanations are given in a concise manner, under each term, without reference to distant parts of the book, and the most useful species and varieties are repeated under each genus, by which we think the memory will be much assisted and relieved. The Editors appear to consider this dictionary also, as a very useful means of furnishing students and medical readers with a valuable index to their common place book, or a means of reference to any author who has suggested useful hints or improvements on medical subjects.

Observations

Observations on Dr. PEARSON'S *Examination of the Report of the Vaccine Pock Committee, of the House of Commons, concerning Dr.* JENNER'S *claim for Remuneration. By* THOMAS CREASER, *Member of the Royal College of Surgeons, London.* 8vo. pp. 90. Bath, 1803.

THESE observations appear to us to be candid, fair, and well becoming the great respectability of the author. But as we have already given our opinion on this subject at length; and as we believe the mind of every medical practitioner is made up respecting it, we shall not enter into a particular analysis of the pamphlet at present.

An Essay on the Medical Application of Electricity. By JOHN BIRCH, *Esq. &c.* 8vo. pp. 57. London, 1803.

WE think the various applications of Galvanism to medical purposes, which have been made during the last months, require that we should revive and support an attention to Electricity in *general*, as a powerful mean of preserving and restoring health. Mr. B. explains his motives for publishing this pamphlet in the following terms: "That those opinions on the medical application of Electricity, illustrated by cases which were published some years since by the late ingenious Mr. George Adams, have been considered as useful, must appear not only from the demand which has been made in England for the book, but also from its having been translated into the German and Italian languages. I am now solicited to revise and reprint that little work by itself, which I most willingly undertake, in order to promote the medical application of electricity.

"Experience is the test by which we can judge of a proposition; and repeated facts, well authenticated, carry conviction with them. It is now upwards of twenty years that I have unremittingly pursued this point of study, with the assent and approbation of some of the ablest practitioners. The late Doctors Heberden and Warren, Mr. Else, Mr. J. Hunter, and Mr. Gunning, were witnesses to several of the cases here mentioned: to these cases I could make large additions, if I thought it necessary; but additions are needless, as it must be evident, since the electric power has efficacy sufficient to cure diseases of such consequence, it will not fail in those of inferior degrees."

An Account of the Discovery and Operation of a New Medicine for Gout; 8vo. pp. 194. London. 1803.

IN this age of parsimony, respecting medical remuneration, we cannot be surprised to see a gentleman, who believes he has discovered a remedy for one of the greatest afflictions of advanced age and affluence, come forward with caution, and endeavour to secure

cure some adequate reward for his labours and anxiety. Mr. W. assures us that he will *publish* his medicine as soon as its efficacy is established, under the inspection of medical practitioners who may be thought competent to decide on its safety and merits.

MEDICAL AND PHYSICAL INTELLIGENCE.

[FOREIGN AND DOMESTIC.]

A Cold, attended by symptoms of a very alarming nature, has been general in the city of Paris for some time; it made its appearance anterior to the setting in of any frost, and during the period of heavy rains, which had continued near a month. Women are much more generally affected than men, inasmuch as very few of the latter have been attacked, and these principally old and infirm. Much variety has been observed in the degree of violence of the symptoms, but no particular age, habit, or constitution has been remarked to favour this excess. Some people, extremely delicate, have been but slightly affected, while others, apparently robust and healthy, have fallen a sacrifice. The disease begins by shiverings, violent pain in the head and back; in some instances it has commenced by a violent fit of coughing, and been followed by pain in the head, &c. Though the patient complains much of soreness in the throat, and pain in swallowing, there is in general but little appearance of inflammation on looking into the fauces. The trachea and its lining membrane would seem to be particularly the seat of this soreness; in every case the lungs are more or less engaged, and, in some instances, though not frequently, the person is afflicted by stitches. There is very little expectoration, but the patient labours under a strong desire, and is constantly making efforts to expectorate. The small quantity which is coughed up, is of a purulent nature.

In a great number of cases, the pulse has been but little affected, but in no instance has it been observed to be full, strong, and hard, as in pleurisy or symptomatic fever from inflammation. In those cases where the complaint has been severe, the pulse has been small and quick. In the cases that proved fatal, the lungs were more particularly engaged, and the person died as if from suffocation.

In every instance, the pain in the head has been extremely violent; but a very remarkable symptom, and one which has seldom failed to occur, is a pain in the alveolar processes, extending to the

the ears; the cough and thirst are uncommonly troublesome throughout this disorder, which does not seem to have any particular crisis, the symptoms gradually subsiding after an indeterminate number of days; the complaint has sometimes continued three and four weeks. Past experience in the treatment of epidemical complaints of this nature, does not seem to have directed the conduct of the Paris physicians in the treatment of this complaint. In many instances, recourse has been had to bleeding and evacuations. In all the cases that have terminated fatally, this plan had been adopted. Neither emetics nor antimonials seem to be of any service. Sweating, far from being difficult to excite, is very easily produced, but never with any benefit. The disposition to perspire has been remarked very strong in the complaint, and in many instances it has been excessive.. In a few cases the complaint has given way, or at least disappeared, after taking a few grains of Dover's powder; and notwithstanding the state of the head and lungs, it has not been observed that opium did any harm; nay, in some instances, it was even useful. The generality of practitioners here have been content with observing the disorder. The use of slops or different kinds of diet drinks were the usual remedies. In those cases where a very opposite practice was pursued, much more benefit was found to arise. When the pulmonary symptoms ran very high, blistering was found of service.

Dr. Erdman, of Dresden, in his Medical Observations, relates a curious phenomenon, which was produced by the passion of anger in a boy of a delicate complexion, light hair and a sanguine temper. Whenever this boy fell into a passion, one half of his face would become quite pale, while the other was very red and heated, and these two colours were exactly limited by a line, running down the middle of the forehead, nose, lips and chin. When this boy had heated himself by any violent exercise, the whole face became equally red. It is difficult to account for this phenomenon, which is indeed a remarkable instance of the great influence of passions on the organized body.

For preparing the aqua laurocerasi, Van Mons advises to gather the leaves during sun-shine, and having pounded them in a stone mortar, add to the water with which they are to be distilled $\frac{1}{10}$ of brandy, and make a good fire immediately in the beginning of the distillation, because the oil, which has but little volatility, will otherwise not pass over. Professor Wurzer, of Bonn, obtained by distilling one pound of the leaves of laurocerasis with four pints of water, one pint of aqua laurocerasi, which in the dose of fifty drops three times a day, shewed itself very efficacious in hypochondriacal nervous complaints.

Dr.

Dr. HENNING, of Zerbst, has given an account of a remarkable case of elephantiasis, which he observed in an aged woman. The legs of the patient had begun to swell in her last lying-in, and one of them had broke open, and formed a kind of ulcer. The cause of this complaint was probably venereal. The complaint, against which she had without success employed a great number of remedies, remained almost in the same state till she became fifty years old. About this time an eruption, in form of a thick crust, appeared on the lower part of the leg, which shelling off from time to time, emitted a putrid stinking ichor. The first time Dr. H. saw this affection, was when the patient was near seventy; she was then afflicted with a putrid fever, during which the leg became much worse than it had ever been before; it was dark brown, covered with a thick crust from the sole to the knee, and twice as large as in the natural state. After being recovered from the fever, the patient suffered a great deal of inconvenience from the affected leg: a putrid sanies issued from it, and the itching and pains were almost insupportable; the slightest touch made it bleed, and small ulcers arose at the spots that had thus bled. At last the leg became dry, and the crust shelled off by degrees. Dr. H. applied fomentations of milk with the powder of Peruvian bark, and gave elixir. acid. Haller; but a month after the leg became as bad as before, in which state, having continued for about ten days, it got gradually dry. From this time a most remarkable phenomenon was observed, viz. that the leg got always worse at the appearance of the full moon, and having thus continued for about twelve days, it became gradually better, till the next setting in of the full moon renewed the former state. At last these remissions disappeared, and the leg became no more dry, and continually issued a great quantity of very offensive sanious ichor; the crust was thicker than one inch, and spread itself considerably. The patient was extremely emaciated and weak, had an hectic fever, and being attacked by an affection of the breast, died in the eighty-first year of her age. In the space of thirteen years, during which time Dr. H. had the patient under his care, a great number of different remedies were employed, but without the least success; and among the external remedies, he found a powder of rhubarb and Peruvian bark best calculated for putting a stop to the spreading of this complaint. Dr. H. likewise observed several cases of herpes, in which similar appearances, though in a less degree, occurred; and he is of opinion, that elephantiasis and herpes are very kindred, if not the same diseases, which the climate renders different in their external form. He also thinks that herpes is sometimes communicated by infection, but he never saw an instance where it had disappeared during the period of pregnancy. One case came under his observation, in which an inveterate herpes of the face would disappear as long as the woman was suckling the child, but at the period of ablactation, she had frequent cardialgies, which, having ceased, the eruption appeared again in the face.

Dr.

Dr. Schwaz, of Verden, recommends the following mixture against any obstinate case of taenia: ℞ Petrolei unc. ss. essent. asafoetid. dr. vj. mist. four times a day forty drops. What is most curious, he often tried the ingredients by themselves, but saw no effect except when they were combined.

Phosphuret of lime affords a curious compound, on account of the property it has of disengaging, when a few bits of it are thrown into water, a quantity of gaseous bubbles, which, on reaching the surface, inflame spontaneously with a beautiful white flame, and give rise to successive detonations, which may be compared to a running fire of musketry. The method of preparing this substance is as follows: Fill a small glass mattrass, having a flat bottom and long narrow neck, with one part of carbonated lime; place it in a sand-bath, and apply a heat capable of expelling the carbonic acid from the lime. When the decarbonization is near an end, introduce, in portions, a third part of phosphorus, at very small intervals, constantly maintaining the matter at a dark red heat. The phosphorus diffuses itself throughout the whole mass of matter, contracts an union with the lime, loses its volatility, and forms phosphuret. After the whole phosphorus is introduced, let the fire be suddenly slackened, and stop the mattrass with a stopper, having a pneumatic valve, to prevent the access of the air, and which will suffer the gas which remains to escape. When the matter is sufficiently cooled, take it from the mattrass, and put it (taking care not to touch it with the fingers or other moist bodies) into heated glass flasks which can be hermetically heated.

From the late important and striking experiments in Galvanism, it appears, 1. That, taking the cessation of excitability to the Galvanic stimulus as the criterion of life, the heart is not the *ultimum*, but the *primum moriens*; for, while the muscles of the limbs were excited to strong contractions, for even several hours after apparent death, the heart was utterly incapable of being excited to action, either by applying the extremity of the metallic arc to the surface or to the interior of this organ. 2. That the lungs were equally inexcitable as the heart. 3. Not only were the muscles, but the skin and cellular membrane, excited by the Galvanic stimulus. 4. The contractions of the muscles were excited by the metallic arc, applied to the nerves supplying the muscles; but the nerves themselves were not affected. 5. The raising up of the arm was produced, as if by volition, by the Galvanic stimulus. 6. A milky or coagulated matter was formed by repeated contractions of the muscle in contact with the copper wire. 7. When the parts ceased to give out motion, the motion was renewed, with augmented force, by wetting them with a solution of sal-ammoniac.

Mr. Strenger, of Iver, administers the Galvanic influence, in case of deafness, by applying a small ball to the external orifice of the ear, while a much larger one is held in the patient's hand;

hand; the communication is then formed and interrupted alternately by means of machinery, once in every second, for about four minutes daily, for two or three weeks. He asserts that he has thus restored the sense of hearing to forty-five persons.

Mr. CUTHBERTSON has constructed an instrument by which the Galvanic fluid may be applied effectually, for any length of time, without manual assistance, and will, without doubt, hereafter, be as commonly used as our present electrical machines.

In comparing Electricity with Galvanism, it must be observed, that the former acts by its intensity, and the latter by its quantity: That the former is sometimes intense enough to strike a man down, and yet not in quantity sufficient to melt a small wire; but the latter will melt metals, and yet scarcely produce a shock.

In attempting to restore suspended animation by means of the Galvanic stimulus, it is recommended that oxygen gas should at the same time be applied to the lungs.

A very curious and, if true, a most important fact has been reported to the Galvanic Society at Paris, namely, that the fibrine of the blood is sensible to Galvanic irritation, and its contractions become apparent on the application of this fluid.

The sensibility with which certain plants appear to be endowed, is it purely mechanical, or has it any analogy with animal sensibility? This question of vegetable physiology, has been the object of a memoir of Cit. Dutrouil, member of the Society of Science, &c. of Bourdeaux. The author first defines the signification of animal irritability; he next examines how far the movements that are perceived in certain plants, when placed in contact with a foreign body, are the indices of an irritability of this kind; he discovers the cause of these movements in the organization of the plant, and explains them in a manner purely mechanical. The author pays particular attention to the sensitive-plant; he attributes the movement which it makes, when touched with the finger, to the action of the electric fluid, and to the sudden disengagement which is produced when put in equilibrium. He confirms this explication by observing that if the plant be touched with a body, which is not proper to transmit the electric fluid, this movement will not take place. Light produces the same effect on the plant as the contact of the finger, by reason of the electricity which is demonstrated to be contained in that agent. The author afterwards attacks the consequence that certain naturalists draw from the approximation of certain parts of the plant at the period of fecundation, (namely that they are endowed with a certain sensibility) by assigning to this approximation a cause purely mechanical; he does not admit in plants the faculty of perception, except it be that of feeling; and he grounds his opinion on the little analogy that there is between their organization and

and that of the beings in which this faculty exists, and which they only owe to it.

We are happy to inform the public, that the Royal Jennerean Society for the extermination of the Small-pox, is honoured by the patronage of their Majesties and the Royal Family. A great number of the nobility of both sexes have also given it their support, and considerable additions are daily made to the list. The management of the concerns of the Society is referred to three Trustees, a Board of Directors, and a Medical Council. Subcommittees from these are already appointed to provide the necessary accommodations for inoculating in the twelve districts, into which the metropolis is at present divided; in order that the benefits of this invaluable discovery may be diffused as soon as possible. As soon as these are established, due notice will be circulated. As a General Quarterly Meeting of the Society will be held early in March, we hope to be able after that event to announce the commencement of the practice.

Dr. BATTY's Lectures on Midwifery, and on the Diseases of Women and Children, will commence on Monday, March 21, at his house in Great Marlborough Street.

Early in March, Mr. WAGSTAFFE and Mr. SYER will commence another Course of Lectures on the Elements and Practice of Midwifery and the Diseases of Women and Children, at their lecture room, No. 102, Leadenhall Street.

Messrs. BATTLEY and MAITLAND, of St. Paul's Church Yard, desire us to inform the Public, that the medicine *Lichen Islandicus* may be had genuine at their house.

TO CORRESPONDENTS.

The Editors request the author of the proposal for a radical cure of bubonocele, signed S. C. and printed in our last number, p. 161, &c. to transmit his name; otherwise, they shall be under the necessity of giving the priority of that proposal to Mr. Carlisle, who publicly signified his intention to perform such an operation at the weekly consultation of the Westminster Hospital seven weeks before the receipt of S. C.'s letter.

We have received observations on that proposal; but as it is not yet in an authentic form before the public, we have postponed their appearance for the present.

Mr. Nunn's letter, requesting that his case might be returned, as farther investigation had convinced him that it was erroneously stated, did not arrive till after it was printed, and too late to be altered: We therefore request our readers to pay no attention to the statement, till it is properly corrected.

Communications are received from Dr. Noehden, and Dr. Walker, but too late and too long for insertion at present; from Mr. Reece, Mr. Wagstaffe, Mr. Dennet, Mr. Washbourn, P. Q. and from Mr. Jardine by Mr. Blair.